DOCUMENT RESUME

ED 422 525 CE 077 074

AUTHOR Robinson, Chris, Ed.; Thomson, Peter, Ed.
TITLE Readings in Australian Vocational Education and Training Research.
INSTITUTION National Centre for Vocational Education Research, Leabrook (Australia).
SPONS AGENCY Australian National Training Authority, Brisbane.
ISBN ISBN-0-87397-458-1
PUB DATE 1998-00-00
NOTE 439p.
AVAILABLE FROM National Centre for Vocational Education Research, 252 Kensington Road, Leabrook, South Australia 5068, Australia; email: ncver@ncver.edu.au
PUB TYPE Collected Works - General (020) -- Reports - Research (143)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Corporate Support; *Cost Effectiveness; Delivery Systems; Economic Impact; Educational Development; Educational Policy; *Educational Quality; *Educational Research; Foreign Countries; *Inplant Programs; *Job Training; Nontraditional Education; Postsecondary Education; Program Evaluation; Secondary Education; Small Businesses; *Vocational Education; Workplace Literacy
IDENTIFIERS *Australia

ABSTRACT

This volume synthesizes contemporary vocational education and training (VET) research reports and papers published in Australia in recent years. "An Overview of the Research and Evaluation Effort in VET" (Chris Robinson, Peter Thomson) introduces and discusses the 12 reviews of VET research literature. "Learning in the Workplace" (Paul Hager) addresses the increasing emphasis on informal learning and the inherent problems. "Returns to Enterprises from Investment in VET" (Stephen Billett, Maureen Cooper) suggests patterns of enterprise investment vary by enterprise size, degree of specialization in the training required, and geographic location. "VET and Small Business" (Jennifer Gibb) focuses on government role, training approach, suitable delivery modes, information and networking, credibility and quality of training, and equity. "Training Markets" (Damon Anderson) finds a lack of dispassionate and analytical research into their actual effects. "Entry-Level Training" (David Lundberg) concludes that research's contribution to informing policy on entry-level VET could and should have been greater. "Vocational Education in Schools" (Robin Ryan) recognizes the challenges of introducing vocational education into a school system. "Public and Private Training Provision" (Kate Barnett) deals with characteristics of VET providers and VET provision in a competitive training market. "Flexible Delivery of Training" (Peter Kearns) highlights the confusion surrounding adoption of these methods. "Assessor Training Programs" (Russell Docking) reports little effort to monitor program scope and quality, but substantial work to specify appropriate content. "Quality Assurance in VET" (Paul Hager) finds more case studies directed at program development than at evaluation. "Evaluation of VET" (Rod McDonald, Geoff Hayton) concludes evaluation has been little used for VET improvement. "The Impact of Research on VET Decision-Making" (Chris Selby Smith) finds VET research has not been

+++++ ED422525 Has Multi-page SFR---Level=2 +++++

sufficiently influential in affecting decision-making processes. A chapter index is appended. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

NCVER

Readings in Australian vocational education and training research

Edited by
Chris Robinson
& Peter Thomson

© Australian National Training Authority, 1998

This work has been produced by the National Centre for Vocational Education Research (NCVER) with the assistance of funding provided by the Australian National Training Authority (ANTA). It is published by NCVER under licence from ANTA. Apart from any use permitted under the Copyright Act 1968, no part of this publication may be reproduced by any process without the written approval of NCVER Ltd. Requests should be made in writing to NCVER Ltd.

ISBN 0 87397 458 1
TD/TNC 53.27

Published by NCVER (A.C.N. 007 967 311)
PO Box 115
Kensington Park, SA 5068
Australia

Contents

Contributors *ix*
Preface *vi*
1 **An overview of the research and evaluation effort in vocational education and training** *1*
Chris Robinson and Peter Thomson
2 **Learning in the workplace** *30*
Paul Hager
3 **Returns to enterprises from investment in vocational education and training** *57*
Stephen Billet and Maureen Cooper
4 **Vocational education and training and small business** *01*
Jennifer Gibb
5 **Training markets** *143*
Damon Anderson
6 **Entry-level training** *218*
David Lundberg
7 **Vocational education in schools** *245*
Robin Ryan
8 **Public and private training provision** *207*
Kate Barnett
9 **Flexible delivery of training** *297*
Peter Kearns
10 **Assessor training programs** *319*
Russell Docking
11 **Quality assurance in vocational education and training** *340*
Paul Hager
12 **Evaluation of vocational education and training** *303*
Rod McDonald and Geoff Hayton
13 **The impact of research on vocational education and training decision-making** *380*
Chris Selby Smith
Chapter index *420*

Contributors

Editors

Chris Robinson is the managing director of the National Centre for Vocational Education Research (NCVER). Chris has extensive experience as a researcher and as a senior policy advisor on employment, education and training matters in Australia and the United Kingdom. This includes working as an advisor to two Australian prime ministers.

Peter Thomson is the deputy director and general manager of Research and Education at NCVER. Peter has worked in the vocational education and training (VET) field in Australia for the past 16 years and conducted research on many of the topics covered in the 'readings'.

Other contributors

Damon Anderson, research fellow, Centre for the Economics of Education and Training (CEET), Monash University, Faculty of Education

Kate Barnett, principal, Kate Barnett and Associates

Stephen Billett, director, Centre for Learning and Work Research, Griffith University

Maureen Cooper, research assistant, Centre for Learning and Work Research, Griffith University

Russell Docking, principal consultant, Skill Resource Management Systems Pty Ltd

Jennifer Gibb, principal, Gibb and Associates

Paul Hager, senior lecturer, School of Adult Education, University of Technology, Sydney, Faculty of Education

Geoff Hayton, senior research fellow, Research Centre for Vocational Education and Training, University of Technology, Sydney

Peter Kearns, director, Peter Kearns and Associates, Education and Training Consultants

David Lundberg, director, Centre for International and Cross-cultural Studies, University of South Australia

Rod McDonald, director, Research Centre for Vocational Education and Training, University of Technology, Sydney.

Robin Ryan, research scholar, School of Education, Education and Social Research & Consultancy, Flinders University of SA

Chris Selby Smith, professor, Centre for the Economics of Education and Training (CEET), Monash University, Department of Business Management

Preface

Readings in Australian *vocational education and training research* has been designed to provide readers with a synthesis of a large number of contemporary vocational education and training (VET) research reports and papers that have been published in Australia in recent years. The focus is on studies published in the 1990s.

The topics covered by the literature reviews contained in each chapter include aspects of enterprise training, workplace learning, training markets, VET in schools and entry-level training and the provision of delivery of VET. There are also overview chapters on VET research more generally, VET evaluations and the impact of research on decision-making.

Most of the papers in this volume were prepared as part of a series of 'research stocktakes' that were undertaken to inform the development of priorities for Australia's new national VET research and evaluation strategy. *The national research and evaluation strategy for vocational education and training in Australia, 1997–2000* was published by the National Centre for Vocational Education Research (NCVER) in 1997. The new national VET research and evaluation strategy was prepared by the NCVER under the guidance of the National Research and Evaluation Committee (NREC).

The literature reviews contained in each chapter of this volume have been prepared with the assistance of funds from the Australian National Training Authority (ANTA).

The topics covered in this volume are by no means exhaustive and literature reviews of further VET issues have been commissioned by NCVER. In particular, studies looking at different aspects of equity in VET are under way and will be the subject of a future companion volume.

We hope that the material in this volume will be of interest in Australia's VET sector. In particular, the volume is designed for policy-makers, teachers and trainers, researchers and students with an interest in VET.

Readers are advised that more information on VET research studies and about most of the research studies cited in this book can be obtained from NCVER's research database VOCED. Printed and CD Rom versions of VOCED can be obtained from NCVER (ph: + 618 8333 8400) or it can be accessed directly on the world wide web at the following address:

http://www.ncver.edu.au/voced.htm

Chris Robinson
Peter Thomson

National Centre for Vocational Education Research Ltd

1 An overview of the research and evaluation effort in vocational education and training

Chris Robinson
Peter Thomson

The origins of the present research and evaluation effort in vocational education and training (VET)

THE FIRST THING that will strike the readers of this volume is the almost universal demand from the various authors for more information. It is rare to find an author who is satisfied with the quantity or quality of the information they reviewed. Yet we are told we are living in the information age and we hear complaints from colleagues working in other areas that they are suffering from 'information overload'. Already (they will say) there are not enough hours in the day for them to absorb the amount of information they need to keep abreast of things in their occupation.

This concern about the quantity and quality of information on vocational education and training (VET) in Australia is not new. In the past few years a number of informed commentators have pointed to the paucity of research in VET, in comparison with other education sectors. McDonald et al. (1993), Ramsey (1993), Butterworth (1994, 1996) are just some of those who have highlighted the lack of a research base for VET. This has been particularly noticeable in terms of the small extent to which VET research is thought to have underpinned policy directions for the VET sector in Australia. Hall (1993), McDonald et al. (1993), Wiltshire (1994), McDonald and Hawke (1996) and Seddon (1997) all highlight the low level of influence research seems to have had on VET policy in Australia.

So it is appropriate to begin by asking ourselves if there is something different about research and evaluation work in vocational education and training compared to similar work in higher education or the school sector. The evidence suggests we can give a qualified yes to this question.

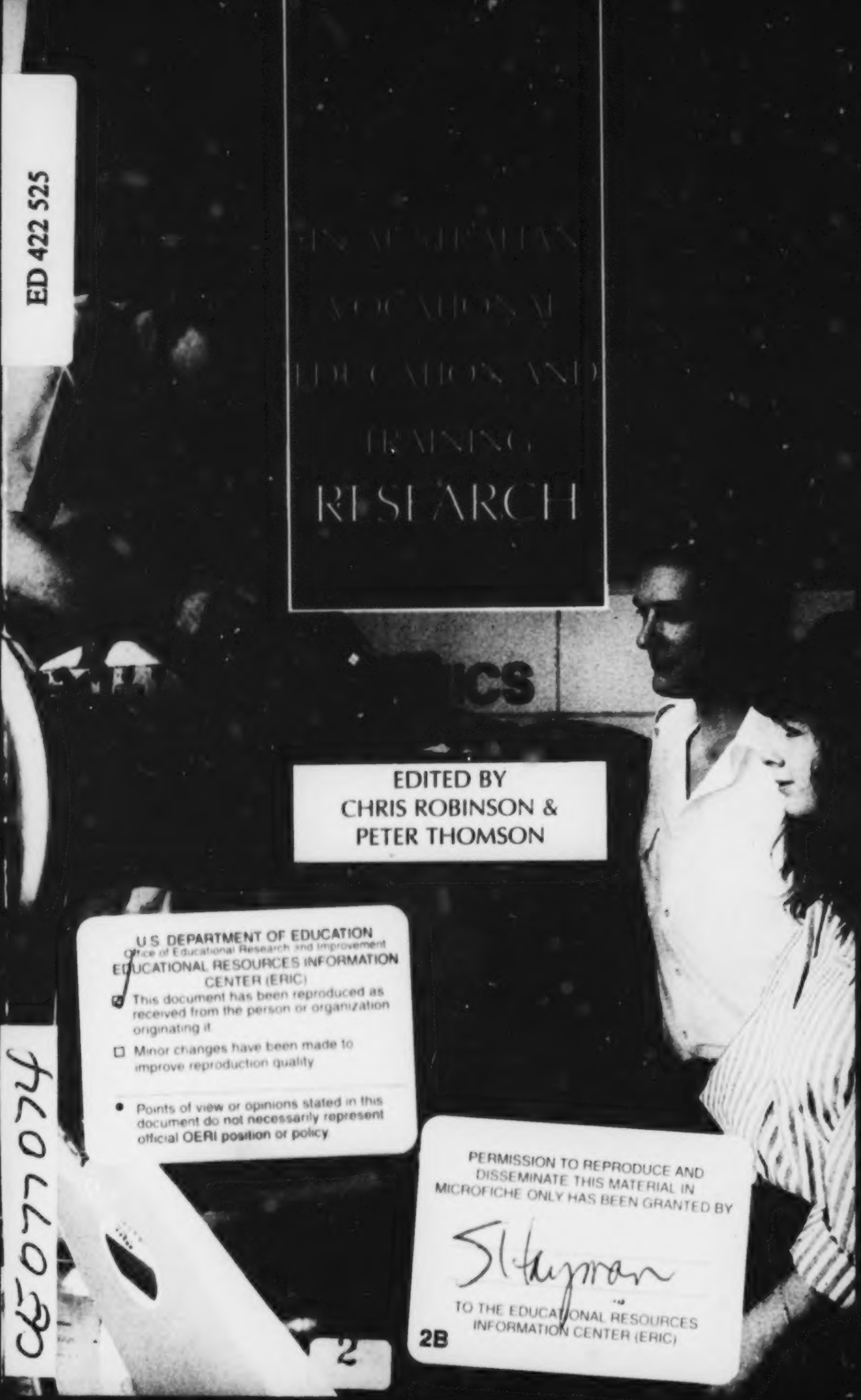
We know, for example, that vocational education and training in Australia does not have anything like the history of research and evaluation work that underpins practices in our universities and schools. Two major government enquiries in the 1970s, the Kangan report (1974) and the Williams report (1979), noted the small amount of research then being done in Technical and Further Education (TAFE) and were particularly critical of the lack of appropriate and accurate statistics. Both Kangan and Williams also drew attention to the need for a national research body for vocational education and this was eventually created at the end of 1981 as the TAFE National Centre for Research and Development. The centre underwent a name change in 1992 and is now the National Centre for Vocational Education Research (NCVER).

When the National Centre was created there was a limited amount of VET research underway. CREW—the Centre for Research in Education and Work—existed at Macquarie University and a small amount of VET research was being done by individuals in CAEs and universities. In Canberra the Bureau of Labour Market Research (BLMR) was doing some VET-related work.

Today CREW and BLMR are gone, but at last count there were around 20 research centres in Australia which had the conduct of VET research as part of their charter; 16 of these centres are based in universities. The increasing interest of universities in VET is not only remarkable for the number of institutes involved, but also for the sudden emergence of this interest. It was only four years ago that Brennan (1994) noted the strikingly low level of interest in the

ED 422 525

IN AUSTRALIAN VOCATIONAL EDUCATION AND TRAINING RESEARCH



EDITED BY
CHRIS ROBINSON &
PETER THOMSON

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
● Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
2B

2

CE077074

TAFE sector among university researchers. Of 44 major education research grants awarded by the Australian Research Council in 1994, only 1.5 were given for work in the TAFE area. The turnaround in this situation can be traced to three developments:

- the creation of the Australian National Training Authority's Research Advisory Council (ANTARAC) in 1993 with a brief to support a national VET research effort. *Funding for research related activities (excluding establishing research centres) amounted to approximately $1m in 1994, $1.25m in 1995, $1.45m in 1996 and $1.95m in 1997*
- the closing or 'downsizing' of State and Territory TAFE authority research branches with a consequent outsourcing of some research and evaluation work
- the encouragement, by governments, of entrepreneurial activities on the part of universities and institutes of TAFE to engage in commercial activities

Quality within the VET culture

It seems that a major contribution to making research and evaluation work in VET different from work in related areas is VET's relative lack of a research culture compared with other areas of education. The lack of a VET research culture, in time, produces a set of related problems in regard to the quality of what is being done. Here, again, the authors of the papers draw attention to the dubious quality of the material which they reviewed. These rumblings about the quality of VET research are being heard more frequently of late. Some research reports are fundamentally flawed, such as those which quote policy statements or working party reports as 'research findings'. Others use data in selective ways, for example, peppering survey reports with quotations from respondents without indicating how frequently the opinion expressed in the quote (and ones similar to it) were made.

Research-free decision-making

Some of the authors also warn of the dangers that follow from policy implementation in the absence of any research and evaluation work. This is seen as a substantive issue because it can prove so costly, not only in monetary terms, but also to the lives of those affected by poor policy decisions. The brief history of competency-based training (CBT) in Australia is a case in point. We are arguably ten years into the implementation of CBT without any strong evidence to validate that it is a superior method of instruction to its predecessors. This is not to say that there has been no research; an estimated $10 million of Commonwealth money was spent over a four-year period in the late 1980s and early 1990s on pilot CBT projects which had research and evaluation components. However, the problem with the work done at the time was that it rarely questioned the underlying principles on which CBT was based. A few researchers drew attention to the problems (for example, NBEET 1991; Stevenson 1992; Hall 1993; Thomson 1993) but the CBT juggernaut has continued on. Ten years experience of teachers and trainers using CBT has seen many changes in the original concept. Most of these changes have their origins in practical experience and doubtless a better version of CBT now exists.

Living with change

The ramifications of the fact that change can occur in this 'research-free' way need to be understood by those of us in the research business. As Scriven (1997) puts it, too many educational researchers are beavering away at 'busy work' and failing to adequately address the needs of student and adult learners. We need to reflect on the possibility that the people responsible for the failure of research to impact on policy might be the researchers themselves.

Irrespective of the reasons behind it, *change* brings its own set of problems. There is a current of unease running through a number of the papers which is essentially a concern about the capacity of the VET sector to deal with change in its various guises. For the most part the changes that generate concern are those being implemented by governments both federal and State. A sector which is only just beginning to come to terms with the move to a competency-based system suddenly finds itself engaging in a somewhat uneasy marriage with the school sector in relation to 'VET in schools'. At the same time there is a move to a competitive form of training market with the new principle of 'user choice' just getting underway.

However, while on the one hand recognising that change generates problems, on the other it needs to be acknowledged that change is a feature of our modern society and not in any way specific to the VET sector.

Criticisms of VET research and evaluation methods

The assortment of facts and conclusions that are reported by the authors mostly have their origins in case study investigations and various forms of survey techniques. We have already noted the complaints about the lack of information on their topics from some of the authors, so perhaps it is important to comment on this predominance of case study and survey methodology.

A major problem with a case study is its lack of generalisability. Therefore, although a case study of a training program being implemented in a particular factory might yield very favourable results about the training, we cannot place too much store on that single study. Case studies should be done in sets and the results pooled and analysed for us to have confidence in the conclusions. If over time and in a range of settings many case studies come up with similar results then we can, in turn, become very confident of those results. Too often in VET we find effects being claimed on the basis of only limited case study data.

Survey methods also present us with questions about the level of confidence we can place in the results. Mailed surveys can be particularly difficult if there is no effort to verify the outcomes by some other method, for example following up the mailed survey with a sample of face-to-face or telephone interviews. Another worry with mailed surveys are the poor response rates that are often reported. Despite cases where fewer than half the survey forms are returned, researchers will sometimes report their data in ways which mask this fact and fail to comment on the possible reasons behind such low returns.

Criticisms such as these are symptomatic of the low regard in which education research is held in general. The downside is:

> *Education research does not provide critical, trustworthy, policy-relevant information about problems of compelling interest to the education public.*
>
> (Sroufe 1997, p. 27)

Education researchers must respond to such criticisms and recognise the limitations of methodologies which rely on case studies and surveys. In VET we need to ask ourselves how many pieces of research we have read in recent times with methodologies that involved establishing compatible comparison groups. To be sure, such a methodology is likely to be more demanding in terms of time and cost but, equally, it is more likely to provide us with results which are more meaningful than some of the 'popular' methodologies.

A further complication of the lack of quality in research is that it allows equivocal and contradictory conclusions to be drawn. Inevitably, this leads to a 'more research is needed' statement by the researchers when, in fact, more of the same sort of research will not get us much further.

Fortunately there could be an upside to all this. Recent work by the American Education Research Association (AERA) reported by Sroufe (1997) has put in place plans for improving the reputation of education research. The AERA is investigating the use of consensus panels whereby a group of education researchers can reach a consensus about what a synthesis of the research on a topic shows. Although the process of synthesis is not without its problems, the outcomes of this American work will be awaited with interest.

New directions in VET research and evaluation

Meanwhile, in Australia, the recently published *National research and evaluation strategy for vocational education and training in Australia 1997–2000* (NCVER 1997) embraces the idea of synthesising research findings to meet the needs of stakeholders—particularly those in the policy area. The new research strategy (described in Robinson 1997) was designed to address at least some of the shortcomings identified above as well as those raised in the remainder of this volume. Indeed the readings that follow are a small beginning in the synthesising process. Although the VET research base may too frequently fail the quality test and too often the researchers conclude that 'more research is needed' we have at least begun the process of addressing these problems.

The 12 reviews of VET research literature presented in this book are discussed below.

Learning in the workplace (Paul Hager)

Australian vocational education and training policies in recent years have been about shifting the emphasis from what courses TAFE and other training providers are able to offer (i.e. the supply side of the equation) to a focus on what industry and enterprises really required in terms of skill formation (the demand side). There has been a corresponding shift in training out of the classroom and into the workplace. But how much do we really know about the effectiveness of workplace learning?

'Learning in the workplace' includes both formal on-the-job training and informal workplace learning. Both are important, with some research stressing the importance of productive interactions between the two. Paul Hager notes in chapter 2 that recent policy decisions have led to increasing emphasis being placed on the informal activities and that this presents problems because informal workplace learning is different from formal on-the-job learning.

Hager notes that informal workplace learning is characterised by such things as its close relationship to the environment of the individual learner's workplace, its unstructured nature and the absence of any formal training program. Characteristics such as these have allowed some people to undervalue informal learning because it is 'enterprise specific' and not related to the national or industry standards.

However, the close relationship between informal learning and an individual learner's workplace can be seen as a good thing. Many businesses work hard at promoting a 'company philosophy' or 'corporate culture' which underpins the way they work and their relationships with the wider community. Therefore, there are expectations about the performance of employees that stem from these company workplace requirements. The learning of a workplace culture is more frequently done informally than formally; it tends to be 'absorbed' by the employees over time as a result of constant exposure.

Recent research on learning in the workplace has demonstrated that:

- simple notions of transfer of skills learnt in the workplace are dubious
- the best kinds of learning in the workplace involve appropriate links between formal training and informal workplace learning
- proper account needs to be taken of the diversity of variables in the workplace environment/culture language, numeracy and literacy are capable of being addressed in a holistic way along with other changes as workplace reform is implemented
- there is much confusion about the 'recognition of prior learning' (RPL) even though it enjoys wide support

Nevertheless, there is still much more we need to know and, in particular, the area of informal learning deserves greater attention. We need to better understand how to apply RPL procedures to informal learning and just how informal learning links with formal learning activities. As well as RPL procedures, the conventional methods of workplace assessment are not well developed. These and the associated record-keeping activities require further investigation and development. There is also an issue about costs. If we move more of our training out of the classroom and into the workplace, we need to know that this produces better outcomes and that these outcomes are worth the extra expenditure that may be involved.

Returns to enterprises from investment in vocational education and training (Stephen Billett and Maureen Cooper)

Knowing more about the benefits and costs to enterprises of training is critical in the context of increasing the skill formation efforts of Australian enterprises and the overall levels of skills in the Australian economy. Many Australian businesses remain sceptical about the value of investing in training and learning, seeing training as a cost rather than an investment. Some enterprises adopt policies of recruiting skilled employees already trained by other enterprises rather than investing in skill formation themselves.

In chapter 3 Stephen Billett and Maureen Cooper analyse recent Australian research which addresses this topic. They found that Australian research over the 1990s into this question suggests that patterns of enterprise investment in training have varied considerably, particularly in relation to factors such as enterprise size, the degree of specialisation in the training required, geographic location and perceptions of the value of training.

They found that the research suggests that most larger enterprises invest in training whereas many small to medium-sized business do not. Enterprises make different levels of contribution to training, depending on the degree of specialisation of the training required and the extent to which publicly funded VET is able to provide the training they require. Convenience, in terms of ease of physical access to publicly funded VET in the locality of the enterprise, is a factor determining its own investment in training. Many enterprises, particularly small ones, do not believe the returns to investment in training match the costs and have displayed little interest to date in securing more detailed information about the returns on training expenditure.

Billett and Cooper conclude that future policies will involve investigating strategies to increase business investment in training. In particular, they conclude that the questions emerging from the analysis of the literature on returns to enterprises from their investment in training include:

- How best can we overcome barriers which inhibit investment in training by small business?
- If low levels of investment in training by small business continue, what approaches need to be implemented to maintain and increase the nation's quantum of training activity?

10 Vocational education and training and small business (Jennifer Gibb)

The empirical evidence about small business involvement in training is clear cut. Fewer than 20 per cent of small businesses report training expenditure, whereas most large enterprises (those with more than 100 employees) are spending considerable amounts on training. The evidence is also that small business training activity in Australia is on the decline, and it has been gradually declining over a long period of time. It is a vital issue because over half of employed Australians work in small businesses. Knowing more about the factors explaining these training patterns will be critical in devising future strategies to address the paucity of training amongst Australia's small businesses (those employing fewer than 20 people).

It should be noted in any discussion of reported training expenditure in small business that this refers to formal training which is structured and therefore does not include the informal training that occurs in small business. Researchers such as Field (1997) have noted that while the amount of structured formal training taking place in small business is low, it does not necessarily follow from this that the amount of learning that takes place is also low.

Jennifer Gibb, in chapter 4, looks at the considerable body of recent Australian research on VET in small businesses, in an attempt to throw light on what the key factors behind this situation are.

Firstly, she examines a number of major reports commissioned in the early part of the 1990s mainly in the area of management education and training. These focussed on the role for government in addressing training in small business.

The strong message that came through these reports is that the training system was failing to meet the needs of small business and the system needed to pay more attention to marketing its products. In addition, Gibb found that there were numerous disincentives or barriers to training faced by small business: cost, location, scheduling, quality and relevance of training and the fact that small business tended to employ people with the skills they needed. By the mid 1990s, there was increasing recognition of the fact that training for small business was generally informal, conducted on site by experienced workers and included advice provided by accountants and bank managers.

Gibb goes on to examine research on the issue of creating partnership arrangements between small business clients and training providers and the fact that training providers must make their product relevant to small business and its goals. The main focus of research in this area has been identifying barriers to business being involved in training, identifying the training needs of managers and employees and reporting on case study research of small businesses and the approach to training being taken.

In examining research on the question of training delivery to small business, Gibb finds that much of the research restates the need for training providers to change how they operate. While many writers have described the needs of small business, there is little research reporting on innovative methods that have delivered what small business wants. A recent development has been research on workplace-based training. However, Gibb argues that this research appears inconclusive because it seems that formal workplace training does not sit comfortably with small business. The success of workplace-based delivery can depend on the commitment of players, the ongoing support and the characteristics of the learning environment at work, about which little is known.

In looking at training formation and networks for small business, Gibb finds the research in this area makes reference to the role that business advisors such as accountants and bank officers play in providing information and advice to small business. Research has also led to pilot projects which establish mentors or networks for certain target groups and report on the success of these approaches. Although much of the research into small business refers to the need to promote a training culture, it is unclear which bodies are responsible for this and what are effective means of providing information about the training system. Little research has been undertaken on the extent to which small business uses networks, which networks are used and what value they provide.

Gibb also examined Australian research in the quality of training provision to small business and into equity issues affecting access to small business training. While there has been some research commissioned into small business and the VET needs of women, people of non-English-speaking background and the rural community, there appears to be no available research into small business and VET needs of indigenous peoples and people with a disability.

Training markets (Damon Anderson)

In chapter 5, Damon Anderson reviews the very considerable volume of recent literature on the issue of training markets in Australia. As Anderson argues, training markets are now a critically important issue in the Australian VET scene because, since the mid-1980s, Commonwealth, State and Territory governments have been engaged in a process of reform with the aim of increasing the efficiency, flexibility, quality and responsiveness of the VET sector in Australia. Among the most important of recent policy developments is the introduction of competition and market reforms. The concept of a training market is now a central feature of government reports and policy literature on VET. The training market has become the dominant model for reframing the relationship between skills supply and demand, and for re-engineering the structure, culture and operations of the VET sector. Within the market framework, competition has been adopted as the key principle for reorganising the financing and delivery of VET programs and services.

Anderson argues that recent attempts to promote the development of a competitive training market are unprecedented in the history of the Australian VET sector. They represent a radical shift from traditional approaches to the provision of VET programs and services which, up to the late 1980s, occurred largely under non-market conditions. The policies and practices associated with the development of a competitive training market have far-reaching implications for participants in the VET sector. They challenge longstanding assumptions about the nature and purposes of VET, and necessitate a thoroughgoing review of the roles, responsibilities and relationships of all stakeholders. As a consequence, the development of a competitive training market has sparked considerable debate in the VET sector.

In his examination of current knowledge about the nature, development and consequences of competition and market reform in the Australian VET sector, Anderson examines key aspects of the theory and practice of a competitive training market and research on the dimensions of the training market. He also considers the available literature on central policy issues such as models of competition and market reform; the role of government; and approaches to the funding and regulation of VET. Research on the impact and consequences of competition and market reform are also reviewed.

Anderson finds that although there is a growing body of research on competition and market reform in the VET sector, the knowledge and information bases remain limited in key respects. Conceptual frameworks and data for analysing the size, structure and composition of the training market require further development. He argues that additional research is required on the extent to which current market conditions satisfy the pre-conditions for an effective training market, specifically in relation to:

- the structure and composition of the supply and demand sides of the market
- the nature of VET products
- the information requirements of clients and providers

Most importantly, he also points to the need for more research on the efficiency and cost-effectiveness of the various models for competition and market reform, and their relative appropriateness for different market sectors. Anderson also stresses that there is a need to develop a better understanding of the costs and benefits of competition and market reforms.

The real message from this chapter, in our view, is that there has been a lot of commentary on the issue of training markets, very often motivated by the particular philosophical stance of the authors (or, more correctly, the commentators). What is missing is a body of dispassionate and analytical research into the actual effects of training markets in Australia.

Entry-level training (David Lundberg)

Issues associated with apprenticeships and traineeships have been given a heightened emphasis recently, with the Federal Government's policy focus on young people and New Apprenticeships.

Moreover, any policy debate on entry-level training in Australia in recent years has really been overshadowed by media focus on the decline in apprenticeship numbers in Australia since the historically high apprenticeship numbers right at the beginning of the 1990s. What is not widely understood is that the decline in apprenticeship numbers, which has largely been halted in the past couple of years, really reflects a shift in employment from traditional manufacturing industries (where apprenticeship training has predominated) towards emerging industries (such as tourism and other service industries) or industries where employment is consolidating (such as retailing). It is these industries where traineeships predominate over apprenticeships (see Ball & Robinson 1998). In the last few years, overall entry-level training numbers have been growing very strongly because of the large increases in the number of traineeships.

Research into entry-level training is the subject of chapter 6. Its author, David Lundberg, found that 'specifying major policy-relevant research findings on entry-level training is rather like identifying beauty'. He points out that there are many worthwhile research projects, but the essential reality is that the major policy directions have been determined by assumed policy premises with strong roots in prevailing political or other ideologies but little basis in research. According to Lundberg, researchers have tested the arrangements, warned of difficulties and suggested improvements and even queried fundamental premises, but changes of direction have been largely politically determined.

Lundberg concludes that the contribution research has made to informing policy on entry-level vocational education and training could (and probably should) have been greater. He argues, however, that research has informed several areas, including knowledge in relation to:

- competence requiring knowledge and understanding as well as performance
- competency-based assessment, including graded assessment
- problems of policy implementation
- unforeseen consequences or limitations of official policies

Lundberg identifies a number of areas for future research into entry-level training that, along with improvements to statistical data, he believes are necessary to improve the quantum of strategic and policy relevant research in this area. These include:

- reasons for the decline in apparent retention to Year 12 since 1993
- reasons for the decline in provision of apprenticeship opportunities, and in the educational profile of students taking those that are available, in comparison with the growth in traineeships
- the relationship between employer and trainee participation in work-based training arrangements and incentives, including training wages and subsidies
- the learning processes associated with achieving competence
- graded standards-based assessment
- factors affecting transfer of knowledge and skill

Vocational education in schools (Robin Ryan)

Perhaps the most 'fashionable' contemporary issue in VET in Australia today is the issue of VET in schools. There has been a massive increase in secondary school retention to Year 12 in Australia over the past couple of decades (although retention rates have declined marginally in very recent years), as well as the realisation that the majority of Year 12 students will not enter higher education. This has meant a resurgence of interest amongst Australian educators in vocational education in the senior secondary years. It is almost as if the 'purging' of vocational education from secondary school curricula that occurred in many parts of Australia throughout the 1970s and 1980s did not happen.

In chapter 7, Robin Ryan argues that during the 1980s and 1990s, there have been sustained increases in youth unemployment and a general perception that the transition from education to employment and adult roles has become more hazardous for young people. These changes have caused a range of the Organisation for Economic Co-operation and Development (OECD) countries to redefine education policy with a sharper vocational focus.

Ryan notes the challenge that the introduction of vocational education presents to a school system which has hitherto largely confined itself to delivering general academic subjects to students seeking the traditional higher school or tertiary entrance certificates at the end of their twelfth year. He found that, so far, the integration of vocational education with general education was poor, as was integration with institutions-based and workplace training initiatives. This was despite the success of the short-term work placement and work experience programs for school students being promoted by organisations like the Australian Student Traineeship Foundation (ASTF). Not only were these programs highly valued by the students taking part, but also participation in the programs generally enhanced the skills sought in general education. Ryan also draws attention to the evidence of successful local institutions' initiatives with *VET in schools* programs and argues that ways must be found to legitimise and resource these at the national level.

Other challenges are even more complex because they require changes to the school culture and its underpinning values. Traditional school teaching cultures do not sit comfortably with vocational education and a substantial (and potentially costly) program of professional development for school teachers will be needed as the amount of VET in schools increases. Furthermore, ways must be found for dealing with the perceptions that some students and many parents have of vocational education as being 'second best' and inferior.

Enough is known about the difficulty of changing values and attitudes to realise that advancing the cause of vocational education in schools is going to require substantial commitment from all those involved over the next few years.

Public and private training provision (Kate Barnett)

There is a degree of overlap between the issues identified by Kate Barnett in chapter 8 and those covered in chapter 5 on training markets by Damon Anderson. Barnett's chapter shows that the recent national policy initiatives related to 'the market' have promoted competitive delivery of VET by seeking to remove the impediments faced by non-TAFE providers and encouraging public providers to operate in a more entrepreneurial fashion. By endorsing an open training market, a more significant role for private providers is automatically encouraged.

However, this change in policy direction was initiated with a dearth of research and statistical evidence about the nature and operation of private provision and about the implications of altering the public-private balance by market-driven provision. It is only in the past five years or so—throughout the period of the implementation of these initiatives—that this knowledge gap has begun to be addressed. However, even so, it is apparent from Barnett's review that more research will be needed in order to obtain a comprehensive and coherent view of the factors which influence the training market and, within this, of the most appropriate strategies to foster a dynamic balance between public and private provision of VET.

Although VET providers are often described in terms of their sectoral base—private or public—this segmentation is not a clear one. It disguises the fact that providers in either sector do not necessarily operate exclusively within one sector. Furthermore, it suggests a degree of homogeneity which does not in fact exist, particularly among the 'private' providers. Public and private provision of training cannot be readily identified in terms of separate sectors, or even in terms of individual providers.

A critical problem for researchers has been the absence of comprehensive data collection about the size and operation of the private and public training sectors. This has made it difficult to determine the composition and relative size of the private sector and, in particular, of the unregistered private sector. Neither the Australian Bureau of Statistics (ABS) nor individual government agencies had, until recently, kept data on private training provision on a regular or comprehensive basis.

In terms of market share, TAFE is the dominant provider of training, even though private providers have increased their share through competitive tendering (when this option is available to them). Providers in the private VET sector have been found to operate within 'niche' markets, thus enabling them to compete with TAFE in a less direct way. Niche markets usually arise from gaps in public sector provision as a result of under-supply or non-provision.

Barnett also reviews the extent to which the key components of training reform such as:

- competency-based training
- accreditation of courses and registration of providers
- quality assurance
- recognition of prior learning
- access and equity

have impacted on the training providers.

Recent research has identified a range of market distortions or barriers to entry which have not facilitated competitive neutrality or a 'level-playing field' in VET provision. These include:

- lack of access in some States to curriculum developed with public funds or, conversely, to curriculum developed privately
- slow and bureaucratic accreditation and registration procedures
- a tendency for accreditation authorities to use TAFE curriculum as a benchmark thus limiting product diversity
- poor articulation to higher education courses
- many courses offered by competitive tender have short-term (one year) funding which disadvantages private providers who are usually reliant on continuity of income to a greater extent than are TAFE providers
- an open training market does not favour all private providers because geographical, political and organisational factors influence their ability to deliver services competitively

Collection of crucial information relating to competitive neutrality has recently commenced, but this critical and, so far, little documented area requires ongoing monitoring as well as the development of a comprehensive and coherent research strategy in order to adequately inform future VET policy.

Flexible delivery of training (Peter Kearns)

Some quite different VET issues get pulled together under the 'flexible delivery of training' (or, more importantly, of *learning*) banner. Some, quite inappropriately, relate to finding yet another application for the latest developments in information technology. Others represent genuine attempts to improve learning outcomes in different situations by using diverse and flexible approaches to the delivery of training (which may happen to encompass the effective educational use of new technologies).

Peter Kearns reviews recent Australian research on flexible delivery in training in chapter 9. Kearns draws our attention to the different interpretations being placed on the term *flexible delivery* and notes that the changing nature of the concept has been driven by the recent policy shifts in VET promoting economic/efficiency objectives. He points out that research has been impeded by a lack of clarity in the concepts used throughout this period with terms such as flexible delivery, open learning, and flexible learning used interchangeably. He goes on to say that research has revealed confusions among teachers and trainers who are unsure whether flexible delivery methods are being adopted for their educational or their economic value. Kearns' review suggests that flexible delivery methods encounter more problems in a training college environment than in industry. Apart from the question about what is driving the change at the college level, staff can be frustrated by such things as inappropriate resources and industrial relations issues relating to teaching awards and work practices.

Not surprisingly, the greatest value of flexible delivery strategies is found in their use with disadvantaged groups. Kearns notes successful examples of the strategies with non-English-speaking background (NESB) students and Aboriginal people. Other work with students who have intellectual or neurological disabilities is also promising. Teachers are, in general, poorly prepared to deal with students with physical disabilities in their classes—flexible delivery methods can be of considerable value to these students. However, the review also emphasises that many teachers and trainers are poorly prepared to implement flexible delivery strategies. For many, flexible delivery represents a different teaching and learning culture both in training colleges and industry. Effective staff development programs are needed to prepare teachers and trainers for the task of implementing the new strategies.

Some specific gaps in the relevant research literature identified by Kearns include the following:

- There has been a relative neglect of learning aspects of flexible delivery including the application of adult learning principles, and of the analysis of the learning benefits and outcomes of alternative delivery strategies.

- There is a major deficiency in the research base related to the economic and social imperatives for lifelong learning.
- There have been few longitudinal studies to monitor outcomes of the strategies which address the barriers to flexible delivery identified in the research.
- There is insufficient ongoing statistical monitoring of different delivery modes and their implications for training outcomes.

One ominous finding in the paper was the suggestion that *learning outcomes* were not the chief determinants for deciding whether or not to use a flexible delivery technology. The future is bleak for any new technology adopted for reasons other than it is an effective method by which students can learn.

Assessor training programs (Russell Docking)

Competency-based assessment has been a prescribed feature of VET in Australia for around ten years. Given this fact, it is therefore worrying to learn how little information we have about the training received by people responsible for conducting competency-based assessments.

Russell Docking notes in chapter 10 that although assessor training courses have proliferated in recent times, there has been little effort to monitor their scope and quality. He points out there is little hard evidence to show that assessor training has made any improvement to assessment procedures and calls for research which compares the efficacy of the judgements made by people who have successfully completed different assessor training courses. Docking also draws our attention to the impact that the process of being assessed has on the individual learner. Research is lacking in this area as the relationships between competency-based assessment and an individual's learning style, self-concept, and motivation are poorly understood. Employers would no doubt embrace competency-based assessments more enthusiastically and be more prepared for their supervisors to be trained as assessors if there was evidence that the end result was a more motivated and highly skilled workforce. The costs of training supervisors to become assessors and conducting competency-based assessments in their workplaces are a new and often unwelcome burden for many employers. This situation will not change for these employers until it is possible to demonstrate that the expenditure is matched by increased productivity.

On a more positive note, the review shows that there has been a substantial amount of work specifying what is appropriate content for the assessor training programs. This has, in part, been driven by a decision of the ANTA Ministerial Council which specified that all assessors should be competent against endorsed competency standards. The assessor competency standards have been developed by the Competency Standards Body--Assessors and Workplace Trainers. The standards date back to the early 1990s and underwent a major revision in 1995. These standards are the basis for the many assessor training courses currently available. The assessors and workplace trainers body has recently produced a set of guidelines to assist the providers of these courses. This has presumably been done to address some of the uncertainties and information gaps detailed in Docking's review. However, the fundamental question as to whether assessor training programs are producing competent assessors still remains unanswered.

Docking's review of assessor training program research has a number of implications for policy-makers and practitioners. These include:

- sponsoring further research to extend our understanding of competency-based assessment, how this approach can be taught to assessors and how the impact of assessment can be evaluated
- incorporating interpersonal skills (communication skills, cultural awareness and gender awareness) in assessor standards
- tightening up on accreditation procedures to ensure that all the assessor competencies are covered, that assessor trainers are qualified and experienced, and that the assessment process is rigorous and includes on-the-job components

- providing for ongoing auditing of assessor training courses to ensure that they conform to their accreditation conditions
- ensuring that all assessors (including TAFE lecturers) are qualified assessors
- establishing a national register of assessors (or comprehensive industry-based registers)

Quality assurance in vocational education and training (Paul Hager)

Every so often a particular technique or procedure is promoted as the panacea for some perceived ill of vocational education and training in Australia. In recent times, *quality assurance* has been one such panacea. In chapter 11, Paul Hager traces the interest in quality assurance in the VET sector to :

- close connections with industry sectors that have gained from the introduction of quality assurance measures
- the more competitive training market that has been increasingly encouraged by governments in Australia
- increasing demand for quality by those paying for courses which are becoming increasingly more expensive

This interest has been further reinforced by the Australian National Training Authority's emphasis on developing system-wide performance measures for the VET sector. Hager reviews a range of quality programs and identifies those most relevant to vocational education and training, namely: quality assurance (the ISO 9001 standards), best practice and benchmarking, and self-managed teams. Perhaps, more importantly, he identifies programs that are of doubtful relevance to the sector and also a need for more sector-specific information on quality approaches to help guide future initiatives.

Research into quality programs in the VET sector consists, for the most part, of case studies directed at the development of quality assurance procedures rather than an evaluation of how well these procedures are working. Evaluative studies of quality initiatives that have become well established are therefore seen to be an important research priority in the short term. Furthermore, nearly all the research reviewed has been done in the publicly funded sector of VET, hence there is also a priority for more work to be done in the private sector.

At this point in time, the difficulty in drawing definite conclusions from the VET sector research into quality is due to a combination of three factors:

- the diversity of approaches to quality in the sector
- the diversity of targets to which the quality measures have been applied
- the very preliminary stage of most of the projects

However, if we are prepared to see quality as a journey rather than a final destination, the diverse nature of the work and the fact that much is at a preliminary stage should not be a problem. Processes and procedures related to the work of organisations are never static and we must recognise that the quality journey is evolutionary in nature.

It is clear that the development of quality approaches will continue unabated in the foreseeable future using criteria such as those based on the Standards Australia ISO series and the Australian Quality Awards. However, as the review indicates, there is a need to evaluate the range of approaches being adopted within the sector before any one approach can be recommended.

Nevertheless, whatever quality program is implemented, one thing we can be sure of is that its success will depend upon the attitude and commitment that everybody involved in the program has towards quality improvement.

Evaluation of vocational education and training (Rod McDonald and Geoff Hayton)

The adoption of program budgetting across most areas of government expenditure in Australia and other developed economies over the past couple of decades has included public spending on education and training. Formal evaluation strategies have been incorporated as part of these program budgetting processes.

In chapter 12, Rod McDonald and Geoff Hayton have examined the extent to which evaluations of VET have been undertaken. They have also examined what evidence exists in the Australian VET context for gauging the extent to which evaluations have led to the improvement of VET.

Rather disturbingly, they conclude that evaluation has so far been little used for the improvement of VET in Australia. Their review of the literature found that over the past five years, there were only 98 published evaluations on vocational education, and four on workplace training. Moreover, in a recent survey of industry, only 48 per cent of worksites had formally evaluated any training delivered in the past year.

McDonald and Hayton go on to say that evaluation, like research, has not been used to provide the support that it could to those framing VET policy because:

- VET policy has, in the past, tended to be formed at a rate that made evaluative input impossible.
- Only rarely do evaluations include analysis of cost-benefit issues.
- Results of the evaluations are rarely made available in a form which will facilitate their use by those framing policy.
- Policy issues which are more difficult to resolve are often avoided in evaluation projects.

McDonald and Hayton conclude that evaluation has the potential to play an important role in vocational education and training. By its focus on formulation of the significant questions, data gathering, analysis, and subsequent action it can make decisions at all levels better considered, and can help to improve policy and practice. They argue that much more emphasis should be given in the future to building on the results of evaluations to improve VET in Australia.

The impact of research on vocational education and training decision-making (Chris Selby Smith)

The final chapter of this book is an ambitious attempt by Chris Selby Smith to review relevant literature about the overall impact of research on VET decision-making. It also includes some relevant international literature. This review was done as part of a broader study on the topic (Selby Smith et al. 1998).

Not surprisingly, the author finds that the impact of research on decision-making in VET is highly complex and dynamic. He notes that most VET research in Australia has been carried out in universities or specialist education and training research centres. In the case of universities he points out some VET researchers are unfamiliar with the complexities of the VET policy-making process, and that this may limit the use which is made of their research. On the positive side, Selby Smith shows that the more recent Australian VET research literature indicates an increase in VET research at the practitioner level.

He also found a tendency for the literature to be focussed on linkages involving the flow of information. More recently there has been greater recognition given to the movement of people as an important linkage between research and decision-making.

The general tenor of the review is that VET research has not been sufficiently influential in affecting VET decision-making processes in Australia.

References

Ball, K & Robinson, C 1998, 'Young people's participation in and outcomes from vocational education and training', in *Australia's youth: Reality and risk*, Dusseldorp Skills Forum, Sydney.

Brennan, M 1994, 'The Australian Research Council', in *Research priorities in vocational education and training—a discussion*, NCVER,.Adelaide.

Butterworth, P 1994, 'VET research in Australia: A long way to go', *Australian and New Zealand Journal of Vocational Education Research*, vol.2, no.1, pp. 19–34.

—— —— 1996, 'Some new challenges for research in vocational education and training', in *No limits to learning*, proceedings of the Adult Learners' Week conference, NSW Board of Adult and Community Education, Sydney, pp. 56–63.

Field, L 1997, 'Training and learning in small business: Issues for research', Research Centre for Vocational Education and Training, University of Technology, Sydney.

Hall, W 1993, 'Does research influence policy?', *Some current research issues*, papers presented at the TAFE Senior Executives' conference, NCVER, Adelaide.

Kangan report 1974, *Technical and further education in Australia*, Commonwealth of Australia.

McDonald, R, Hayton, G, Gonczi, A & Hager, P 1993, *No small change: Proposals for a research and development strategy for vocational education and training in Australia*, University of Technology, Sydney.

—— —— & Hawke, G 1996, 'How should we spend our research money', in *Australian Training Review*, 20, p. 11.

NBEET (National Board of Employment, Education and Training) 1991, *Progress and prospects in improved skills recognition*, NBEET Commissioned Report No.10, AGPS, Canberra.

NCVER (National Centre for Vocational Education Research) 1997, *The national research and evaluation strategy for vocational education and training in Australia: 1997–2000*, NCVER, Adelaide.

Ramsey, G 1993, 'Vocational education and training research: Making an impact', in journal of papers and proceedings, *The research experience in TAFE*, Sydney, pp. 6–11.

Robinson, C 1997, 'Making VET research count', *Australian Training Review*, 20, p. 2.

Scriven M 1997, 'The vision thing: Educational research and AERA in the 21st Century Part 1: Competing visions of what educational researchers should do', in *Educational Researcher*, May, pp. 8–21, American Education Research Association, Washington, DC.

Seddon, T 1997, 'Good thinking, good practice: Towards an institutional design for research in VET', paper presented at the Good Thinking, Good Practice conference, Surfers Paradise, 26–28 November.

Selby Smith, C, Hawke, G, McDonald, R & Selby Smith, J 1998, *The impact of research on VET decision-making*, NCVER, Adelaide, forthcoming.

Sroufe, G E 1997, 'Improving the "awful reputation" of education research', in *Educational Researcher*, October, pp. 26–28, American Education Research Association, Washington, DC.

Stevenson, J 1992, 'Policies and practices in vocational education and training in Australia', in *What future for technical and vocational education and training*, conference papers, vol.1, NCVER, Adelaide.

Thomson, P 1993, 'Current research issues in competency-based assessment', *Some current research issues*, papers presented at the TAFE Senior Executives Conference, NCVER, Adelaide.

Williams report 1979, *Education, training and employment*, report of the Committee of Inquiry into Education and Training, Commonwealth of Australia.

Wiltshire, K 1994, 'The role of research in policy making', in selected and edited papers presented at the National TAFE Senior Executives' conference, pp. 63–75, NCVER, Adelaide.

2 Learning in the workplace*

Paul Hager

Importance of learning in the workplace

LEARNING IN THE workplace is viewed as vital to the implementation of Australia's national training program, whose overarching concern is to improve the nation's skill formation process. Major features of this program (ANTA 1994, p. 1) include:

- training which integrates industry, enterprise and individual needs and supports lifelong learning
- competency-based training, achieving national industry and enterprise standards
- more flexible pathways and delivery
- increased access and improved outcomes for groups of people who have missed out on training opportunities in the past
- complementary roles for on- and off-the-job training
- nationally recognised qualifications which are portable across industries and States and Territories
- a broader range of providers who co-operate and compete to meet national and international training demands

---

* This chapter is a reprint of Hager, P 1997, *Learning in the workplace*, Review of research, National Centre for Vocational Education Research, Adelaide.

If learning in the workplace is thought of as formal structured training, it is explicitly given a significant role in the fifth of these points; it is also implicit in the first, third and fourth. However, its connection with the other points emerges when the scope of 'learning in the workplace' is expanded to include informal workplace learning.

Following the Allen Consulting Group's review of progress in implementation of the national training reform agenda (ACG 1994a, 1994b, 1994c, 1994d), the Australian National Training Authority (ANTA) has adopted measures to move the training emphasis more to the demand side. These measures include placing more responsibility for developing, endorsing and implementing competency standards in the hands of enterprises with a quality executive summary assurance approach replacing rigid central regulation (ANTA 1994). If successful, these changes will increase the role of learning in the workplace in the overall skill formation and accreditation system. However, there is little in the documents relating to these changes that shows awareness of the full scope of learning in the workplace as discussed above. If the new emphasis on the demand-side of training is taken to its logical conclusion, then the role of learning in the workplace will become even more crucial to training reform than it has been so far. This is so, since a focus on the demand-side of training gives privileged status, to the workplace as a site of learning, when the main question about training needs becomes 'what learning needs to occur for productive participation in this workplace?', rather than 'what available courses should our staff take?'.

Another major factor behind the growing interest in learning in the workplace is change itself. There are any number of indicators of the presence of change. A major one, linked to many of these indicators, is the increasing globalisation of the world economy. Ford (1990, pp. 1–2) argues that the overall impact of change is such that the standard concepts that have been used for thinking about workplaces, such as 'technology', 'work organisation', 'employment relations', and the like, have lost their currency and now serve merely to cloud our thinking. According to Ford, this is because they derive from the era of the early forms of mass production and involve assumptions that no longer apply.

Policy matters

The most visible impact of Australia's national training program has been the widespread development of competency standards. As a result, competency-based training has become increasingly prominent. However, many have worried that narrow approaches to competence, which focus on performance of discrete tasks, will defeat the aim of expanding and deepening the skills of the workforce. Hence the increasing recognition of the need for broader approaches to competence (e.g. NSW Government Green Paper 1996, pp. 23–24). Ford (1990) traced the adoption of narrow approaches to competence to the adherence to outmoded concepts, as noted above.

According to Ford (1990, pp. 3–5), the internationalisation of demand has meant that organisations need to transform themselves to provide greater quality, improvement, innovation, adaptability, reliability and service.

The required transformations by organisations centre on a more multifunctional and multiskilled workforce, facilitated by the creation of a responsive workplace culture. There are diverse strategies for achieving this, but they generally integrate new kinds of work organisation, innovations in technology, innovative skill formation practices, and innovations in employee commitment, participation and remuneration.

Ford (1990, p. 8) argues that 'skill formation' should be viewed as 'an emerging holistic concept that embraces and integrates formal education, induction, continuous on-the-job learning, recurrent off-the-job learning and personal development'. By pointing to the importance of continuous on-the-job learning in skill formation, Ford is endorsing the wider notion of learning in the workplace as outlined at the start of this chapter. It should be noted that Ford's characterisation of the changing workplace is not merely a theoretical one, but is grounded in diverse experiences of workplace reform and organisational transformation (Field & Ford 1995).

While the two main factors behind the growing interest in learning in the workplace are its role in the national training framework and the impact of change, other factors are also relevant. These include:

- training providers seeking to satisfy industry training requirements
- the search for cheaper alternatives to the high costs of off-the-job training to small- and medium-sized businesses
- it provides a possible way to overcome the remoteness of many trainees from the centres that offer off-the-job training in their field

Factors such as these are behind some of the research projects discussed in the following sections.

Nature of learning in the workplace

As noted earlier, the term 'workplace learning' is ambiguous. It can refer to formal on-the-job training as distinct from off-the-job training in, for example, vocational education institutions. However, 'workplace learning' can also refer to the informal learning that occurs as people perform their work. The research discussed in this chapter tends to stress the importance of both these kinds of learning in the workplace and points to the importance of productive interaction between them. Here the term 'in formal workplace learning' is used to distinguish it from the formal learning of 'on-the-job training'. The wider term 'learning in the workplace' is used where the distinction does not matter.

A major obstacle to informal workplace learning's being taken seriously as a component of a person's overall education is the way that it differs on many criteria from traditionally accepted 'educational' activities. While this is most obvious in the vast differences between informal workplace learning and typical learning in educational institutions, it is also the case that informal workplace learning is very different from on-the-job training. These differences can be described as follows:

- Teachers/trainers are in control in both formal learning in educational institutions and in on-the-job training, whereas it is the learner who is in control (if anyone is) in informal workplace learning. That is, formal learning is planned, but informal workplace learning is often unplanned.
- The learning that takes place in educational institutions and in on-the-job training is largely predictable as it is prescribed by formal curricula, competency standards, learning outcomes, etc. Informal workplace learning is much less predictable as there is no formal curriculum or prescribed outcomes.
- In both educational institutions and on-the-job training, learning is largely explicit (the learner is expected to be able to articulate what has been learnt, e.g. in a written examination, in oral answers to instructor questioning, or in being required to perform appropriate activities as a result of the training). In informal workplace learning, the learning is often implicit or tacit (the learner is commonly unaware of the extent of their learning).
- In formal classrooms and in formal on-the-job training the emphasis is on teaching/training and on the content and structure of what is taught/trained (largely as a consequence of the three previous points). Whereas in informal workplace learning the emphasis is on learning and on the learner.
- In formal classrooms and in formal on-the-job training the focus is usually on learners as individuals and on individual learning. In informal workplace learning, the learning is often collaborative and/or collegial.
- Learning in formal classrooms is uncontextualised, i.e. there is an emphasis on general principles rather than their specific applications. While formal on-the-job training is typically somewhat contextualised, even here there is some emphasis on the general, e.g. the training might be aimed at general industry standards. However, informal workplace learning is by its nature highly contextualised.
- The learning that takes place in educational institutions and in on-the-job training is conceptualised typically in terms of theory (or knowledge) and practice (application of theory and knowledge). The

learning that comes from informal workplace learning, on the other hand, seems to be most appropriately thought of as seamless know how.

Given these trends, it is hardly surprising that formal learning/education has been seen as being much more valuable than informal learning (including informal workplace learning). Informal workplace learning is a paradigm case of informal education and, hence, tends to be undervalued particularly by those with a stake in the formal education system at whatever level. Historically, training has been viewed as the antithesis of education. It is only a slight caricature to say that training has been thought of as aimed at mindless, mechanical, routine activity in contrast to education which aims for development of the mind via completion of intellectually challenging tasks.

Despite this 'chalk and cheese' conception of education and training, the trends just noted above show that in many key respects the two have more in common with one another than either one does with informal workplace learning. One indicator of this is the rapid growth of formalised workplace training that incorporates externally accredited courses. This is occurring at all levels of the workforce from operatives through to senior managers. It is a trend that is expected to continue (Misko 1996). In contrast, external accreditation of informal workplace learning is still very rare.

As could be predicted from the above, informal workplace learning has not been researched widely (Hager 1996). Thus, the Australian research on informal workplace learning discussed in this chapter is innovative. Despite the past tendency to overlook informal workplace learning in favour of formal on-the-job training, there is an increasing claim emerging that it is crucial that skill formation features appropriate links between the two. Their joint contribution to Ford's holistic concept of 'skill formation' was noted in the previous section. The research of Sefton et al. (1995) at four sites in the automotive industry broadly supports Ford's holistic view of skill formation. As they state:

> *Results of this research demonstrate clearly that both informal learning and formal training are important in the workplace. More important however are links between the two.* (Sefton et al. 1995, p. 178)

There are a number of topical issues that surround learning in the workplace.

How transferable are skills learnt in the workplace?

All of the research points to the fact that simple notions of transfer are very dubious. As Misko (1995) suggests, it is more realistic to view transfer as application of previous knowledge to new settings that result in learning of significant new knowledge. Misko goes on to provide an outline of the factors that research has shown to facilitate or inhibit transfer, as well as a discussion of the implications of this for teaching/training.

The issue of transfer has also been raised in relation to the key competencies, which are viewed as basic enabling competencies for work, education and life generally.

The key competencies identified by the Mayer Committee were:

- collecting, analysing and organising information
- communicating ideas and information
- planning and organising activities
- working with others and in teams
- using mathematical ideas and techniques
- solving problems
- using technology

In addition, some Australian key competency pilot projects have trialled 'cultural understanding' as an additional key competency. A recent report (Hager et al. 1997) synthesises the findings of key competencies projects conducted in the Australian vocational education and training (VET) sector. This report concluded that as well as confirming the role of key competencies as basic, enabling competencies for work, education and life generally, the projects demonstrated that they have the following advantages:

- They enable learners to develop other capacities increasingly valued in the workplace, such as creating an enterprising culture, assuring quality, learning to learn and lifelong learning.
- They are a powerful means to motivate unemployed youth to engage in education and training.

The role of the key competencies also helps us think about transfer in a way that is consistent with the research evidence:

> *Rather than being viewed as discrete skills that people learn to transfer, the key competencies should be seen as learnt capacities to handle an increasing variety of diverse situations. Thus transfer becomes more a growth in confidence and adaptability as learners experience ever more success in their deployment of the key competencies to a range of situations. To put it another way, perhaps it is not so much the key competencies that transfer, as growing understanding of how to deal with different contexts.*
>
> (Hager et al. 1996, p. 82)

Contextuality of workplace competence and its implications

The contextuality of workplace competence has received some recognition in the implementation of national training reform, principally in the acceptance that in some instances it may be necessary to produce enterprise-specific versions of industry competency standards (e.g. McDonalds Family Restaurants, Chubb Security). This contextuality of workplace competence may raise questions about the value of generic training programs in some cases. For instance, Bodi et al. (1996) found that in the meat industry site that was the focus of their research project, a train-the-trainer program that was bought in from outside of the enterprise and the industry failed to produce competent trainers. They recommend that such courses 'need to be enterprise-specific in terms of content, delivery and evaluation' (Bodi et al. 1996, p. 32). On the basis of their automotive industry research project, Sefton et al. summarise this issue best when they point out:

> *. . . the need for a great deal of the training (on topics such as company policies, enterprise technology and equipment, company work systems, new enterprise products, customers and suppliers of the company and the introduction of new technologies into the workplace) to be highly contextualised and enterprise specific. However, there are some areas that could benefit from generic curriculum resource packages, such as occupational health and safety, rights and responsibilities of employees, industry or business context, etc. However, much of this material would also need to be contextualised to the specific workplace. It would appear to be counter-productive to send people to class to learn generic curriculum if the aim is for the workplace to become an effective learning environment.*
>
> (Sefton et al. 1995, p. 179)

Very importantly, contextuality is also a characteristic feature of the key competencies. This is a unanimous finding of a number of research projects (e.g. Stevenson [ed.] 1996; Gonczi et al. 1995; Hager et al. 1996). Recent research on the role of key competencies in work has shown that when any significant component of work is considered, there tends to be a clustering of key competencies together with more specific competencies as well as features that are particular to the context. Thus the key competencies, by their nature, serve to direct attention onto broader approaches to competence. A second crucial feature of key competencies is their strong sensitivity to changes in work context. The different forms that key competencies take in different workplace contexts has now been confirmed by both Australian (Gonczi et al. 1995; Hager et al. 1996; Stevenson [ed.] 1996) and overseas (Stasz et al. 1996) research. Stasz et al. concluded that:

> *. . . whereas generic skills and dispositions are identifiable in all jobs, their specific characteristics and importance vary among jobs. The characteristics of problem solving, teamwork, communication, and disposition are related to job demands, which in turn depend on the purpose of the work, the tasks that constitute the job, the organisation of the work, and other aspects of the work context.* (Stasz et al. 1996, p. 102)

The Australian research also found, amongst other things, that different combinations of key competencies are required in different industries and occupations. Also, that the customer service industries, in contrast to other industries studied, seemed to require a wider range of the key competencies (Gonczi et al. 1995). This was so because the provision of quality customer service typically involves nearly all of the key competencies. For instance, a salesperson, who finds out and clarifies a customer's needs, explains the range of available options, helps the customer to reach a decision, and then advises them on what needs to be done to implement the decision, has made major use of at least the first three key competencies (collecting, analysing and organising information; communicating ideas and information; and planning and organising). And this is only a part of their job. It has been found also that the key competencies are major features of work in workplaces that focus on high performance or high quality products (Field & Mawer 1996; Gonczi et al. 1995).

Hence it would seem that the key competencies are a very suitable vehicle for studying variations in the four previously noted interrelated factors that Ford identified as crucial for the creation of a responsive workplace culture: new kinds of work organisation, innovations in technology, innovative skill formation practices, and innovations in employee commitment, participation and remuneration. This is doubly so because the nature of the Australian key competencies is such that they jointly underpin much that is involved in each of these areas.

It appears, then, that the key competencies provide an antidote to the widespread tendency to view competency standards in a narrow, task-based way. As Hager et al. conclude:

> *the key competencies provide a good basis for viewing work more holistically. As a general principle, if it is found that particular units of work can be described without involving the key competencies, then the work units are probably being described too narrowly to be very useful from a training perspective.* (Hager et al. 1996, p. 82)

Portability of skills

The desirability of portable skills is a central given of national training reform. Thus the perceived importance of people having a generally recognised written record of their skill attainments. However, there are still some tensions surrounding this issue. In particular, some employers worry that the main effect of portable skills will be increasing staff attrition. As the above discussions of transfer and the contextuality of workplace competence imply, portability should not be taken to mean that new employees will not need an induction period when they move on to a different job. There is not a lot of research that directly focusses on portability. However there is some evidence that when asked about the portability of their skills, workers tend to think only in terms of specific skills, thereby overlooking their more generic capacities (Wilson & Engelhard 1994, pp. 14–15). Thus it seems that workers are likely to underestimate the quantum of their skills that is portable.

Outcomes of training

At first sight, the outcomes of training might be thought to be relatively simple. If the training is successful, then, obviously, the required skills have been learnt. However, matters are more complex than this. For example, if a firm trains its staff in certain skills but they never use the skills, the outcomes of this training are probably unsatisfactory. Catts et al. (1996) developed a linked analysis of training outcomes based on four levels of evidence:

- Level 1: Evidence of staff responses to the training
- Level 2: Evidence of the competencies achieved
- Level 3: Evidence that the skills are used and maintained
- Level 4: Evidence of effects on business performance

While it is common for the outcomes of training to be assessed at Level 1 (e.g. participants complete simple questionnaires at the completion of the training session to indicate their satisfaction or otherwise), Level 2 assessment is less common, and assessment at Levels 3 and 4 is rare.

Although there is often little attempt to assess the outcomes of training, it is common for staff of an organisation to perceive that training has produced tangible benefits. For instance, Barnett (1995, p. 6) in case studies of six assorted training providers found that 'the perception of management was that training (especially competency-based training) had produced a range of observable improvements and, as such, meant that any costs involved represented a positive investment'. Likewise, synthesising the findings of 13 case studies of Australian companies (collected in Moy [ed.] 1996), Misko (1996, pp. 85-86) noted that they found a perceived improvement in quality and quantity of work-based training in the last five years. As well, 20 discrete benefits of work-based training were identified in the case studies as a whole. The most frequently cited of these were (Misko 1996, p. 89):

- an improved occupational health and safety record and/or employee awareness (11 case studies)
- increased worker flexibility (9 case studies)
- improved productivity (9 case studies)
- customer satisfaction (demonstrated through reduced complaints, reduced 'call backs' or warranty jobs and increased repeat business) (8 case studies)
- contribution to organisational goals and culture (including having a better informed workforce and enhanced credibility for the organisation within the industry) (7 case studies)
- increased relevance of the training to business requirements and job performance (5 case studies)
- increased efficiency (demonstrated through faster start-up times and less down time) (5 case studies)
- improved employee competence and more consistent job performance within the organisation (4 case studies)
- positive feedback from staff and increased employee demand for training (4 case studies)
- increased employee satisfaction (4 case studies)

While some of these can be assigned readily to the four levels of evidence in the Catts et al. analysis of training outcomes, others, such as 'increased worker flexibility' and 'having a better informed workforce' are more nebulous, thereby illustrating the elasticity of the notion of 'outcomes of training'.

Can the cost-benefits of training be demonstrated?

A more sophisticated approach to the outcomes of training is to attempt to quantify the costs and benefits. As Noble et al. (1996, p. 238) found in several large research projects on training in Australian companies/enterprises, there are few serious attempts to ascertain the costs and benefits of training outcomes. However, the rise of the national training reform agenda has stimulated a renewed interest in this question, which is one that touches on some complex issues (McDonald 1995; Misko 1996). A study by Billett (1994c), involving seven case studies within large Queensland firms, found that it is medium-term strategic goals rather than profits that firms use to justify their expenditure on training. Although unable to produce quantitative cost-benefit data for the case studies, Billett concluded that cost-benefits of training could be assessed in four areas: production, staff, equipment, and work practice.

Building on Billett's research, Catts et al. (1996) investigated the 42 return on investment for training undertaken in four small retail businesses in provincial cities in south-east Queensland. Based on the four-level, linked analysis discussed in the previous section, the results of this study were mixed. In one firm the training was found to have a positive longer-term effect, in another the training had short-term effects that were not sustained. In a third firm the training, coupled with other factors, had an adverse effect. In the fourth firm the training was not completed within the time frame of the research. Given the restricted nature of this study, further research of this general kind is warranted. (Further discussion of the intricacies of this kind of research can be found in chapter 3, 'Returns to enterprises from investment in vocational education and training', by Stephen Billett and Maureen Cooper.)

Integration of training

'Integration of training' is a term used in the literature in several senses. Probably the most common usage refers to integration of on- and off-the-job training. For instance, this was a common concern in the case studies reported by Barnett (1995, p. 45). In this usage, the concern is with integrating off-the-job training with formal on-the-job training. In these cases informal learning in the workplace is not included as a significant component. A related, but different, sense of 'integration of training' refers to the emerging problem that formal off-the-job VET courses are unable to produce graduates that fully meet workplace competency standards. As a general rule, workplace competency standards include elements that require significant learning experiences in fully operational workplace conditions. In recognition of the fact that off-the-job training cannot supply these learning experiences, it is sometimes said that off-the-job training can produce 'workplace ready' graduates but not 'workplace competent' ones (Hager 1994, p. 10). In response to this, there have been various initiatives that seek to integrate off-the-job training with appropriate kinds of workplace experience. For example, a metals industry project proposed three different models for implementing integrated training of this kind (Australian Committee on TAFE Curriculum 1991). It is interesting that this appears to be a case where as well as formal off-the-job training and on-the-job training being relevant, informal learning in the workplace may also be a significant component. To the extent that this is so, the challenge will be to provide significant amounts of the right kinds of real workplace experience. This is an area for further research.

Another sense of 'integration of training' covers cases where training is specifically linked to particular programs, such as quality improvement (Misko 1996, p. 98) or enterprise-specific workplace standards (Misko 1996, p. 100). A still broader sense of 'integration of training' seeks to take account of the wide range of factors that can significantly influence training within an organisation. For example, Sefton et al. (1994) report on a project that piloted the delivery of the Vehicle Industry Certificate within six enterprises across the industry. They worked with a 'model of integrated training' that sought to combine in a 'practical, ethical, innovative and thoughtful' way the following components:

- a conceptual framework (or set of ideas) on learning, language, workplace change and so on
- a set of strategies for action and implementation
- a set of principles on learning in the workplace

They defined 'integrated training' as 'training which is based on those elements which are integral to the training context'. These elements include such factors as:

- organisational and technical systems
- key competencies
- the technical language and 'lingua franca' of the workplace
- cultural factors
- the social, political and industrial parameters and constraints affecting the workplace including change initiatives
- access and equity issues
- existing skills and potential of employees

(Sefton et al. 1994, p. 8)

This integrated approach to training also informed a subsequent major project (Sefton et al. 1995). These projects are notable for taking account of formal off-the-job training, on-the-job training, and informal learning in the workplace. More important, they argue that even more crucial are the appropriate links between formal training and informal learning in the workplace (Sefton et al. 1995, p. 2). According to the reports, both of these projects were successful. Their significance seems to be such that further follow-up work would be worthwhile, e.g. in different industries and in different kinds of workplace contexts.

Factors that affect the quality of learning in the workplace

The quality of the learning that occurs in the workplace is very sensitive to a range of factors. Major ones that will be discussed in this section include:

- the workplace environment/culture
- authentic learning experiences
- quality of learning materials
- role of language and literacy
- company/business size

Clearly, various of these factors overlap and interrelate to some extent, particularly as they impact on learning in the workplace whether it be formal or informal.

The workplace environment/culture

In the first section of this chapter, the major impact of Australia's national training reform agenda on workplaces and the learning that takes place within them was noted. Drawing on Ford (1990), these changes were located within the larger international picture. Given the seeming inevitability of change in the workplace, participants would appear to have no alternative but to engage in learning of some kind. This learning will be significantly shaped by the broad features of the workplace environment/culture. Since there is wide scope for ongoing change in the workplace environment/culture, such learning will potentially be of several kinds over several phases. This situation of workplace instability can be represented by a model developed by Hayton and Loveder (1992). This model draws on the work of Bolwijn and Kumpe (1990), who based their version of the model on data from case studies carried out in the manufacturing sectors of several industrialised countries.

Hayton and Loveder adapted the model for the purposes of describing broad features of the workplace environment/culture of the four Australian organisations that they were studying. In this model, organisations are seen as progressing along four organisational phases, each with their own distinctive performance criteria and structure/culture requirements. These differences are shown in figure 1.

Figure 1: The four phases of development for an organisation (adapted from Bolwijn & Kumpe 1990)

Organisational phase	Performance criteria	Structural/culture requirement
Efficient firm	efficiency	specialisation and hierarchical organisation
[illegible]	[illegible]	[illegible]

Source: Hayton & Loveder 1992, p. 2

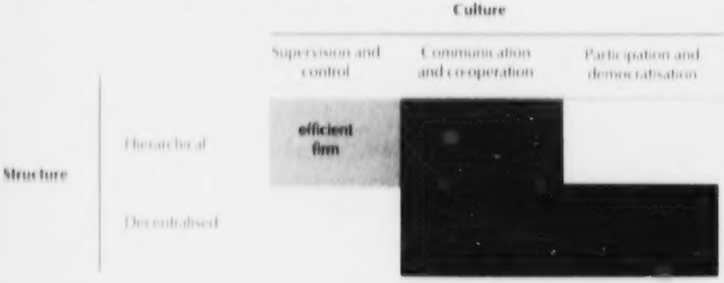
A model like this has the merit of highlighting the diversity of variables in the workplace environment/culture that will shape the learning which takes place there. It distinguishes structural variables from cultural ones and links them both to various market orientations. It also suggests that these variables may change in a relatively orderly way as the organisation moves from being efficient through to being innovative (see figure 2). While recognising that 'companies or parts of companies will never show the "pure" characteristics of one phase' (p. 2), Hayton and Loveder (1992) nevertheless found that all four organisations they studied were in the first two phases. Given that the organisations were selected for study on the basis that they were well advanced in workplace reform and award restructuring processes, this suggests

BEST COPY AVAILABLE

that theories are well in advance of actual Australian practice in this area.

McKavanagh (in Stevenson [ed.] 1996, pp. 188–203) has developed, trialled and validated a Workplace Learning Environment Questionnaire which 'can be used to assess psychosocial aspects of informal, on-the-job learning environments'. The questionnaire is based on five dimensions: support, clarity, independence, collaboration and innovation. According to McKavanagh (p. 188) 'learning in workplaces is more clearly defined, more collaborative, and more innovative; but is less supported and offers less independence'. Although this claim may be broadly true, it no doubt depends on individual circumstances.

Figure 2: Structural and cultural change pathway


Culture
Supervision and control
Communication and cooperation
Participation and democratisation
Structure
Hierarchical
Decentralised
efficient firm

Source: Hayton & Loveder 1992, p. 3

It is clear from the above that good research on learning in the workplace will need to take proper account of the diversity of variables in the workplace environment/culture that will help to shape such learning. The research projects by Sefton et al. (1994, 1995) are good examples in this respect. Sefton et al. (1995, p. 61) offers 'a framework for investigating workplace learning and change' which provides a good starting point for policy-makers and researchers thinking about these matters.

BEST COPY AVAILABLE

Authentic learning experiences

Providing trainees with opportunities to learn from real tasks that matter in a workplace setting achieves better learning. Such learning is known as 'authentic learning'. In particular, as Billett (1993, 1994a, 1994b, 1996) has shown, it strengthens procedural knowledge, i.e. knowledge of the techniques and skills that comprise 'how to get things done' in this particular workplace. Gaining procedural knowledge is viewed as an important part of the development of workplace know-how. Authentic learning experiences also encourage learners to become active participants in their own learning. Although informal workplace learning is authentic learning by definition, on-the-job training may be authentic or not depending on circumstances. Hager (1994) argues that the term 'on-the-job' should be reserved for cases that are authentic.

Quality of learning materials

Chandler et al. (1995) applied recent research in cognitive theory to the design of computer-based training packages for use in the workplace. Traditional on-the-job training packages were found to be largely ineffective when compared with multimedia instruction based on cognitive models. This kind of research is obviously significant for those involved in the production of on-the-job training packages of all kinds.

Role of language and literacy

Recent research in the area of language and literacy stresses the highly contextual nature of speech and writing. How we speak and write is very much shaped by the particular situations we are in and by our own purposes. Thus language and literacy are important components of the learning that occurs in workplaces. Sefton et al. (1994) provide a good example of a training project that seeks to incorporate language and literacy into the overall project design. Language and literacy considerations are also important in the assessment of learning that has occurred in the workplace (see Bloch & Thomson 1994, pp. 21–22).

Company/business size

Not surprisingly, formal structures for on-the-job training are contingent on company/business size. Misko (1996) found that the great majority of small companies had no formal structures for work-based training, while about half of medium-sized and three-quarters of large enterprises had such structures in place. Similar findings were obtained by Gonczi et al. (1995, pp. 22–23). However, Misko also found that, irrespective of size, many of the companies that lacked formal structures for on-the-job training provided informal training as needed, e.g. when inducting new employees.

Recognition of learning in the workplace

Crediting workplace performance

Australia's national training reform program, with its complementary roles for on- and off-the-job training and more flexible pathways and delivery, has promoted the public recognition of competence no matter ~~how it was~~ acquired. As noted earlier, off-the-job education/training and formal on-the-job training are alike, with similar procedures for assessing and accrediting achievement in them. The same cannot be said for informal workplace learning. These differences can be brought out by considering what 'recognition of prior learning' involves in each of the three cases.

- For off-the-job education/training (usually formal classroom learning), 'recognition of prior learning' is well known and established. It is usually called 'credit transfer' and involves matching content and levels of subjects completed by the candidate in other courses.

- For formal on-the-job training, 'recognition of prior learning' involves the candidates showing that they have achieved specific learning outcomes (or perhaps demonstrating that they meet competency standards).
- For informal workplace learning, 'recognition of prior learning' is at once more easy and more difficult. It is more easy in the case where overall recognition in the particular occupation is concerned. For example, suppose someone has become a very successful tailor without any formal training. Recognition of their standing as a tailor is relatively straightforward—they have samples of their work, testimony of customers and other tailors, etc. On this basis, they would likely be admitted to (say) an advanced course in tailoring, even though they lacked formal qualifications. But suppose they apply for admission to a diploma in costume design and fabrication, with exemptions based on their work knowledge and experience? Here matters will likely become somewhat tricky. There may be some skill components for which recognition is fairly easy. It will be the underpinning knowledge and understanding acquired in the practice of tailoring, much of it tacit, which will not readily match up against the content of the diploma course. One problem here is that the know-how gained by informal workplace learning is not strictly equivalent to any course content. As noted earlier, formal courses cannot turn out fully competent graduates precisely because this know-how can only be gained, apparently, from actual workplace experience. Another problem is that the nature of this know-how is not well understood anyway (see Hager 1996).

Reflecting these differences between recognition of the three kinds of learning, Wilson and Lilly (1996) found 'considerable confusion exists regarding the meaning and use of the term RPL'. This confusion is exacerbated by differences in interpretation and terminology between States and Territories. Thus, despite the wide acceptance of RPL that has developed in Australia, there is significant scope for further research and development to refine and extend this initiative.

Assessing on the job

The most detailed Australian research project on on-the-job assessment was carried out by Bloch and Thomson (1994). They selected a diverse range of eight case studies to provide examples of best practice in competency-based assessment both on- and off-the-job across a range of training programs, industry and occupational settings. Particular issues identified as crucial in this research were the proper training of assessors; the value of integrated, more holistic assessments; the need to ensure adequate validity and reliability of assessment; the need for training and assessment to take into account the literacy, numeracy and language needs of trainees; the extent to which standards can be made enterprise specific whilst still allowing candidates to maintain skills portability; and the need for improved assessment instruments. Further research on these issues would be timely.

Record keeping

Enterprises need to record the results of workplace assessments. However, it is not possible to generalise on this matter since there will be differences in how records are maintained depending on the kind of context in which the assessment occurs and its purpose (Hager et al. 1994, p. 77). For example, Jeffrey (1992, pp. 45–46) reports on recording arrangements in cases where the training involves joint co-operation of enterprises and VET colleges. In general, considerations of portability require that assessment candidates have a duly certified statement of their assessment results as evidence of their skills that can be presented to prospective employers. So far, however, there does not appear to be much Australian research on this topic. General details about managing assessment systems are given in Hager et al. (1994).

Industrial relations issues

As a result of the implementation of national training reform in Australia, a de facto relationship exists between remuneration and skill levels. Thus there is a 'danger that industrial relations issues related to awards would distort education and training planning and policy' (Bloch & Thomson 1994, p. 9). So it is very important that the procedures for recognition of learning and competence discussed in this section be fair and equitable. Maggs and Bodi (1996, p. 26) argue that, on the evidence of their meat industry project, 'industrial issues . . . cannot be ignored if a training program is to be successful'. In their case, the enterprise-based training program which they judge to be very successful was linked in to an enterprise-bargaining process and an internal grading system. The 'framework for investigating workplace learning and change' (Sefton et al. 1995, p. 61) mentioned earlier supports this argument as it incorporates major industrial relations issues.

Findings and directions for further research

Findings

Research on learning in the workplace is a fairly recent phenomenon. This research has focussed more on on-the-job training than on informal workplace learning. Since learning in the workplace is assuming more prominence in the national training reform process, interest in this topic is likely to grow. So far, research has demonstrated that:

- Simple notions of transfer of skills learnt in the workplace are very dubious.
- While some learning in the workplace is highly contextualised and enterprise specific, other examples of it are more generic.
- Measuring the outcomes of training and quantifying the cost-benefits are possible but complex.

- The best kinds of learning in the workplace involve appropriate links between formal training and informal workplace learning.
- Good research on learning in the workplace needs to take proper account of the diversity of variables in the workplace environment/ culture.
- Language, numeracy and literacy are capable of being fruitfully addressed in an holistic way along with other changes as workplace reform is implemented.
- There is a lot of confusion about recognition of prior learning even though it enjoys widespread support as a principle.

Directions for further research

In general, learning in the workplace, especially the informal kind, needs a lot more high quality research, especially given the importance it is attaining due to workplace reform. More specific topics that would benefit from closer research include:

- the more lasting outcomes of training and their cost-benefits
- the nature of productive links between formal training and informal workplace learning
- application of recent research in cognitive theory to the design of training activities in the workplace
- the role of language, numeracy and literacy in learning in the workplace and workplace change
- applications of recognition of prior learning to informal workplace learning
- assessment of learning in the workplace
- record keeping and management of assessment systems

References

ACG (Allen Consulting Group) 1994a, *Successful reform: Competitive skills for Australians and Australian enterprises*, Report to The Australian National Training Authority, June, Allen Consulting Group, Melbourne.

ACG (Allen Consulting Group) 1994b, *Assessment of structures supporting national training reforms*, Working Paper for The Australian National Training Authority, May, Allen Consulting Group, Melbourne.

—— —— 1994c, *Australia's national training reforms: Views of interested parties*, Working Paper for The Australian National Training Authority, May, Allen Consulting Group, Melbourne.

—— —— 1994d, *Case studies: Experiences with training and the national training reforms*, Working Paper for The Australian National Training Authority, May, Allen Consulting Group, Melbourne.

ANTA (Australian National Training Authority) 1994, *Proposals for more effective implementation of training reforms*, Report to ANTA Ministerial Council, ANTA, Brisbane.

Australian Committee on TAFE Curriculum 1991, *The integration of structured training competence and workplace practice competence: A model developed for the national metals and engineering modules*, Report to the Australian Committee on TAFE Curriculum (ACTC) Ministerial Council, Perth.

Barnett, K 1995, *Australian industry and enterprise training providers*, National Centre for Vocational Education Research, Adelaide.

Billett, S 1993, 'Authenticity and a culture of practice within modes of skill development', *Australian and New Zealand Journal of Vocational Education Research*, vol. 1, no. 2, pp. 1–28.

—— —— 1994a, 'Situated learning—A workplace experience', *Australian Journal of Adult and Community Education*, vol. 34, no. 2, pp. 112–130.

—— —— 1994b, 'Authenticity in workplace settings', in *The development of vocational expertise*, ed. J Stevenson, National Centre for Vocational Education Research, Adelaide.

—— —— 1994c, *Cost benefits of training: A Queensland study*, Queensland Training Officers' Society, Brisbane.

—— —— 1996, 'Understanding workplace learning: Cognitive and sociocultural perspectives', paper presented to the national colloquium Research on Workplace Learning: Defining the Agenda, Research Centre for Vocational Education and Training, University of Technology, Sydney.

Bloch, B & Thomson, P 1994, *Working towards best practice in assessment*, National Centre for Vocational Education Research, Adelaide.

Bodi, A, Greig, A, Maggs, G & Testi, J 1996, *Evaluation of training in the Australian meat processing industry*, Meat Research Corporation, Melbourne.

Bolwijn, P & Kumpe, T 1990, 'Manufacturing in the 1990s: Productivity, flexibility and innovation', *Long Range Planning*, vol. 23, no. 4, pp. 44–57.

Catts, R with McLendon, E, Forlin, C, Arden, C, James, J & Kossen, C 1996, *Validating training benefits in the workplace*, VETRI, University of Southern Queensland, Toowoomba.

Chandler, P, Sweller, J & Jones, B 1995, *Using cognitive science to develop new training techniques for the workplace*, Final Report of ANTA National Research Advisory Council Large Research Project (typed ms.).

Field, L & Ford, G W 1995, *Managing organisational learning: From rhetoric to reality*, Longman Australia, Melbourne.

—— —— & Mawer, G 1996, *Generic skill requirements of high performance workplaces*, DETEC, Sydney. A report commissioned by the NSW Key Competencies Pilot Project, Dept. of Training and Education Co-ordination.

Ford, G W 1990, *Rethinking skilling for a restructured workplace*, The Commission for the Future Occasional Paper No. 10, AGPS, Canberra.

Gonczi, A, Curtain, R, Hager, P, Hallard, A & Harrison, J 1995, *Key competencies in on-the-job training*, UTS, Sydney. A report commissioned by the NSW Key Competencies Pilot Project, Dept. of Industrial Relations, Employment, Training and Further Education.

Hager, P 1994, *On-the-job and off-the-job assessment—An issues paper*, Assessment Centre for Vocational Education, TAFE NSW, Sydney.

—— —— 1996, 'Professional practice in education: Research and issues', *Australian Journal of Education*, vol. 40, no. 3, pp. 235–47.

—— —— Athanasou, J & Gonczi, A 1994, *Assessment technical manual*, Department of Employment, Education and Training, AGPS, Canberra.

—— —— McIntyre, J, Moy, J, Comyn, P, Stone, J, Schwenke, C & Gonczi, A 1996, *Workplace keys: Piloting the key competencies in workplace training*, UTS, Sydney. A report commissioned by the NSW Key Competencies Pilot Project, Department of Training and Education Co-ordination.

—— —— Moy, J & Gonczi A 1997, *Piloting the key competencies in the Australian vocational education and training sector and workplaces—A synthesis report*, Department of Training and Education Co-ordination, Sydney.

Hayton, G & Loveder, P 1992, *Workplace reform and TAFE: Four case studies*, National Centre for Vocational Education Research, Adelaide.

Jeffrey, D 1992, *Workplace training in the metal & engineering industry*, Engineering Skills Training Development Centre, Victoria.

Maggs, G & Bodi, A 1996, *The evaluation of meat industry training: An enterprise perspective*, Meat Research Corporation, Melbourne.

McDonald, R 1995, *Costing training and assessment—issues paper*, Assessment Centre for Vocational Education, TAFE NSW, Sydney.

Misko, J 1995, *Transfer: Using learning in new contexts*, National Centre for Vocational Education Research, Adelaide.

Misko, J 1996, *Work-based training vol. 1: Costs, benefits, incentives and best practice*, National Centre for Vocational Education Research, Adelaide.

Moy, J (ed.) 1996, *Work-based training vol. 2: Case studies*, National Centre for Vocational Education Research, Adelaide.

Noble, C, Smith, A & Gonczi, A 1996, *Enterprise training in Australia: Industry profiles and case studies*, Office of Training and Further Education, Melbourne.

NSW Government Green Paper 1996, *The construction industry in New South Wales: Opportunities and challenges*, NSW Department of Public Works and Services, Sydney.

Sefton, R, Waterhouse, P & Deakin, R (eds) 1994, *Breathing life into training: A model of integrated training*, National Automotive Industry Training Board, Doncaster, Vic.

—— —— Waterhouse, P & Cooney, R 1995, *Workplace learning & change: The workplace as a learning environment*, National Training Board for the Automotive Industry, Doncaster, Vic.

Stasz, C, Ramsey, K, Eden, R, Melamid, E & Kaganoff, T 1996, *Workplace skills in practice*, Rand/National Center for Research in Vocational Education, Santa Monica, CA.

Stevenson, J (ed.) 1996, *Learning in the workplace: Tourism and hospitality*, Centre for Skill Formation Research and Development, Griffith University, Qld.

Wilson, B & Engelhard, M 1994, *Young people in full-time work: Issues affecting apprentices*, Youth Research Centre, University of Melbourne.

Wilson, J & Lilly, M 1996, *Recognition of prior learning*, National Centre for Vocational Education Research, Adelaide.

3 Returns to enterprises from investment in vocational education and training*

Stephen Billett
Maureen Cooper

Context

THE NEED FOR Australia to become more competitive internationally—particularly during a time of rapid technological change—has led to demand for the development and upgrading of the skills required for workplace performance. Enterprises need to respond quickly to market demand for new and innovative products, services and processes. Such responsiveness requires a skilled workforce and places increased value on the knowledge and skills needed by enterprises to implement successful innovations in the workplace (Burke et al. 1994). Australian governments over the last decade have focussed on the nation's global competitiveness, premised upon a skilled and flexible workforce. Moreover, they have encouraged participation in skill development through emphasising links between productivity and remuneration within micro-economic reform, which often mandated training arrangements in restructured industrial agreements.

---

* This chapter is a reprint of Billet, S and Cooper, M 1997, *Returns to enterprises from investment in VET*, Review of research, National Centre for Vocational Education Research, Adelaide.

Being mindful of the potential cost to the public purse of increased training activity through restructured awards, initiatives were enacted to encourage more of the cost of training to be borne by the private sector, as recommended by Deveson (1990). The introduction of the now defunct Training Guarantee Scheme in 1989 was one such initiative. It aimed to encourage equity in the contribution by enterprises in the skill development of the nation's workforce through a commitment to their employees' development. Arising from this initiative was the concept that enterprises' contribution to workers' skill development was not a cost, but rather an investment in the enterprise's skill base. If all enterprises were to contribute, the nation's skills base would be maintained and the burden shared, while securing national goals of increasing the quantum of industry training.

Leading from this initiative and including a focus on micro-economic reform at the enterprise level, other enterprise-based factors are now influencing decisions about the contribution (investment) by enterprises in developing the skills required for workplace performance. For example, Billett (1994a) reported that among the enterprises he studied, training was valued for more than its ability to develop skills and knowledge associated with narrow vocational goals. It was also valued for its ability to assist with workplace change and the development of employees' skills in decision making, teamwork and continuous improvement. Similarly, Wolf (1996) reports from research across Organisation for Economic Co-operation and Development (OECD) countries that employers will pay for the development of current specific skills and some generic skills that will lead toward achieving strategic goals. Taking an Australian example, the car manufacturer Ford, which views education and training programs as the means of supporting organisational restructuring with the company, has made a significant investment in education and training since the early 1990s (Miller 1996).

The recent literature provides useful insights to understand further what motivates the degree to which enterprises of different sizes, speciality and location invest in training. It also informs about who is interested in measuring the benefits of training and in what ways. This leads to some questioning about the effectiveness of past policies. These policies aimed to encourage the development of the nation's workforce through workplace provisions and increasingly to place the cost of this development within enterprises. As well as demonstrating areas well addressed by contemporary research, this review of the literature finds gaps in knowledge which should become priorities for research.

Enterprises and investment

The degree of investment required or being committed to by enterprises remains uneven. Some enterprises will or are expected to bear the full cost of training, while other enterprises' skill development needs are furnished through programs which are funded largely at public expense (Moran 1994). There are different kinds of investments in training that enterprises can make. Some enterprises use the labour market to meet their need for skilled workers (Sloan 1994; Misko 1996). However, whether they intend it or not, all enterprises, including the latter, make a contribution through the provision of learning experiences which are often referred to as 'informal' (Misko 1996; Guthrie & Barnett 1996). To what degree the knowledge learnt through these experiences is robust (transferable and adaptable) will likely be determined by the types of activities learners engage in and the kind of guidance they access when undertaking these activities (Billett 1996).

Participation in structured entry-level training which includes both on and off-the-job experiences is another kind of contribution. Apprenticeships characterise these arrangements and usually involve the enterprise making some contribution in the form of wages of the employee while they are participating in the off-the-job components and supervising apprentices on the job. In the early years of their training, apprentices may not always be viewed as covering the costs of their employment (Dockery et al. 1996).

Providing specialised training to develop initial or further workforce skills through sending employees to training programs is another kind of investment that enterprises make. In addition, some enterprises cover the cost of their employees' participation in appropriate programs on receipt of evidence of their successful completion. The provision of an internal training role comprising staff and facilitators dedicated to training is a more comprehensive type of investment which often results from particular enterprise needs (Billett 1994a). However, there will be different reasons why enterprises may select to adopt one or more of these options. The basis by which enterprises make these differential commitments to training includes factors associated with size, specialisation and location. While dealt with separately, these variables are interdependent.

Size

Findings indicate that differences in concerns and focus are influenced by the size of an enterprise and strong evidence suggests quite different patterns of investment occur in enterprises of different size. Larger enterprises are more likely to be making greater contributions to the development of the nation's workforce than smaller enterprises. This is particularly evident in figures about participation in formal vocational education and training (VET) programs (Sloan 1994). But to secure a full picture of enterprise commitment to VET, there is a need to include informal as well as formal programs. Informal training activities do not lend themselves well to the type of reporting favoured by formal VET programs. For instance, the type of in-house training in Japanese corporations as part of everyday practice is not readily quantified (Dore & Sako 1989). Hence, despite the enormous commitment by Japanese corporations to the skill development of their workers, that country does not fare well in some early international comparisons of VET (see Sloan 1994).

It is important to examine studies which relate to both formal and informal training, as activities which might be classified as informal may well characterise the training investment within both small and large enterprises. In this review, formal training refers to training which has some type of structure (e.g. intents and stated processes) which may or may not be credentialled. Informal training refers to that which takes place as part of everyday activities in the workplace and may lack stated intents and processes. So, for example, the on-the-job experiences of apprentices would be considered informal, whereas their experiences in a TAFE college or enterprise training room are formal. For the purposes of this review, large enterprises are those with 100 employees or more; medium enterprises, with between 20–99 employees; and small enterprises, with less than 20 employees.

Enterprise size and formal training

Formal training expenditure per employee is greater in medium-to-large enterprises where it represents an average of 3 per cent of payroll compared with 1.7 per cent in small enterprises (Burke 1995). The lesser expenditure by small enterprises is attributed to a number of factors. These include a greater concentration of jobs with low skill requirements in the small business sector (Baker & Wooden 1995) and managers not recognising the training needs of their employees or being able to set training objectives (Catts 1996). Coopers and Lybrand (1994) reported that small business employers who have not experienced the benefits of training themselves are less likely to arrange for formal training by an external provider. Moreover, small business owners may be reluctant to invest in training when they are preoccupied with short-term survival and small business workers are less likely to undertake training when it provides no incentives to improved job prospects (Wooden & Baker 1996). Furthermore, the compliance costs for an apprenticeship have been reported as falling disproportionately on small business

(Cabalu et al. 1996) which may inhibit commitment to this form of entry-level training.

Smith (1997) reports that large enterprise training departments provide more formal training because the existence of training facilities supports formal, off-the-job training. Baker and Wooden (1995) report that large firms provide more training in management and support functions than small firms who focus their training on activities which are directly related to increased production of goods or services. Catts (1996) found that the formal training employees received in four small to medium-sized enterprises (SMEs) was highly specific and provided by product suppliers (vendor training). It took the form of product knowledge sessions and training concerned with the installation, maintenance and repair of equipment. Another study of large enterprises (coal mines) also reports the value of vendor training when the knowledge provided by this form of training could not be found within the workplace (Billett 1993).

From analyses of Australian Bureau of Statistics (ABS) Training Surveys (1993 & 1994) data, Baker and Wooden (1995) found that 87.4 per cent of workers from small enterprises indicated they had not had any formal training in work time during the previous 12 months compared with 56.7 per cent of workers from large enterprises. The most common response given for not participating in training by workers in small businesses was that there was no need for training. Workers felt adequately trained for their jobs and believed training would make little difference to improved job prospects.

Another factor explaining why small enterprises provide less formal training than large enterprises is that they recruit more trained people than large enterprises (Baker & Wooden 1995). Coopers and Lybrand (1994) reported that small businesses tend to rely on the external labour market for providing new skills rather than training employees. Misko (1996) also reports a preference for hiring already qualified personnel. However, Coopers and Lybrand (1994) note that the tendency for small businesses to train employees did increase as the number of employees and annual turnover increases. Callaghan (1991, cited in Baker & Wooden 1995) reported that innovation and new technologies are an important catalyst for training and these factors tend to increase with firm size. Again, this suggests that when enterprises cannot secure the knowledge required for work performance from within their enterprise, they will make an investment by sourcing it externally or, alternatively, source the labour market.

In a study of four small and medium enterprises in provincial Queensland, Catts (1996) found the owners of the businesses reluctant to pay for structured training. Government funding was secured to assist with the study. The owners reported providing adequate support in the form of paying staff to participate in training particularly when they were unconvinced of the benefits and had little confidence in the training being of any value to their business. In a Coopers and Lybrand (1994) study of about 800 small businesses (funded by the Commonwealth Government), training was not readily identified as a 'top of the mind' way to address problems or issues limiting growth. Training was often seen as 'not relevant', 'too theoretical' and 'without immediate benefit to the business'. Together, these perceptions may be a factor in the persistent low level of investment in training made by small enterprises compared to that of larger enterprises (e.g. Baker & Wooden 1995).

Catts (1996) recommends that government funding be made available to support small businesses where there is no commitment to training in order to encourage participation in structured training and demonstrate its benefits. In Misko's (1996) study, personnel from 13 case study enterprises suggested that work-based training might be expanded if government supported the training required to implement the training reform agenda. This might include rebates for the cost of accredited work-based training, increased provision of funding such as Assistance to Firms Implementing Change (ATFIC) and rebates for train-the-trainer and workplace assessor training.

Strategic alliances may be a training option for some small businesses but this will need to be promoted as a beneficial and viable option (Misko 1996). In addition, the expertise of managers/ principals of small businesses may be lacking. They may require assistance in making appropriate training choices and dealing with the documentation requirements of funding providers.

Moran (1993) acknowledges that the national VET system needs to find ways of communicating more successfully with its clients so that they can readily access information and utilise the training system. Callus (1994, p. 17) suggests that 'few small businesses would have any idea what an ITAB [industry training advisory body] is or does, or what competency-based skills are' (p.17).

This observation was supported by Wooden (1997), who reports survey findings which suggest that less than 30 per cent of respondents from small businesses recognised the name of their relevant ITAB, compared to almost 48 per cent of respondents on firms having more than 50 employees. Smith (1997) reports on case studies of private sector enterprises that showed many small businesses did not have knowledge of training availability and how to access it through training networks. He also found that whilst a few enterprises, particularly those in the food industry, were carrying out industry-based training programs, the majority of enterprises were not implementing training reforms as envisaged by the government. There was also a lack of knowledge regarding national competency standards for industries and accessibility of training.

Guthrie and Barnett (1996) report a lack of understanding amongst enterprises regarding the formal accreditation of training programs. They also highlight perceptions that excessive bureaucracy has discouraged some enterprises from participation in the formal training process. From survey responses, Misko (1996) found that few enterprises used government incentives for work-based training. Reasons given included the inappropriateness of the incentive, the lack of awareness of available incentives and the bureaucratic nature of the incentive arrangements. However, of 13 case study enterprises, Misko (1996) reported that 12 had accessed some form of government work-based training incentives. These incentives had been significant in the decision to employ apprentices and trainees and the provision of English language literacy and numeracy programs. The case studies reflected the survey responses in referring to problems of bureaucratic structures, which included inflexibility, not catering for enterprise needs and the paperwork associated with applications and reporting requirements. Together these were held as disincentives to participating in government schemes. Callus (1994) and Schofield (1994) question the relevance of a big business manufacturing model of training for small businesses in a range of industries. Schofield (1994) questions the appropriateness of traditional course-based models of training for small business where other methodologies may be more relevant.

A concern arises out of recent research which suggests that the interest in training is not being sustained in new enterprise-based industrial agreements. Callus (1994) reports the results of a study of 119 enterprise agreements covering less than 20 employees. He found that only 44 per cent of agreements made any reference to training compared to 69 per cent of agreements covering 20 employees or more. Misko (1996) concluded that the provision of formal work-based training is not at all widespread in Australian enterprises. Smith (1997) reported that training provision in enterprise bargaining negotiations amongst the case enterprises he studied was low. Moreover, similar but more alarming findings are reported by Guthrie and Barnett (1996). They found that only one third of the 1913 recent enterprise agreements they examined mentioned training arrangements and only a quarter of agreements had a structured training approach. However, training may be provided as the operational issues mentioned in agreements are put into practice. Further, only a small percentage of these actually proposed structured training arrangements. Together, this data suggests that commitment to securing benefits through training is dissipating.

The form of participation in training which is most commonly reported by enterprises was informal, unstructured and on the job. The incidence of this type of training was only significantly lower in very small enterprises with fewer than 10 employees. In fact, 78 per cent of these workers reported receiving informal training compared with 84 per cent of workers in large enterprises (ABS 1993; Baker & Wooden 1995). Misko (1996) also reports that a majority of small enterprises surveyed indicated that although they were not involved in any formal work-based training, practical training was provided by experienced employees who explain, demonstrate and supervise as new employees learn their tasks.

Guthrie and Barnett (1996) conclude that the importance of informal training at enterprise level has not been fully recognised and is undervalued. This may well be true, because in one study (Billett 1994b), the benefits of an investment in formal training in one enterprise were overshadowed by the reported contributions of everyday experiences (informal training) in the workplace. As the data suggest, this informal learning is as much a part of larger enterprises' contribution to training as that found in small enterprises. Smith (1997) found that some enterprises were giving responsibility for training to line managers who would act as coaches to their employees. This is less costly than other programs and provides very relevant training. Harris (1996) also reports of the increasing emphasis in workplaces on coaching rather than instructing and the development of a learning culture.

Savellis (1995) describes some large organisations that are moving away from the traditional approaches of formal classroom training to work-centred learning (WCL), in which learning becomes part of employees' day-to-day tasks. Learning modules developed by experienced workers are used on the job. For enterprises, this approach to learning is always linked to their needs, is relevant and has practical and applicable benefits. Hence, these approaches emphasise the specific outcomes of the training.

Specialisation

Those enterprises whose specialisation coincides with that of existing VET provisions will be served by the publicly funded VET system. But an enterprise whose speciality is outside these provisions, which is unusual or even unique, will receive a different form of assistance. For example, enterprises whose activities are aligned to legislated apprentice VET provisions may make a lower contribution to skill development than those whose training is not supported through public provisions. Case studies of electricity generation, copper smelting and secondary processing were necessarily sponsored by the employer because no public provision was available (Billett 1994a).

Curtain (1996) identified problems of skill development within a number of 'high tech' export companies which had to develop internal labour markets within their enterprises to maintain and expand their business. The Ford motor company in Australia demonstrates the need to spend eight per cent of its salary and wages bill on education and training. The company does this in support of their core business activity—the design, manufacture and distribution of automotive products. Ford delivers accredited courses in vehicle and automotive manufacturing and engineering, with the goal of working towards total quality excellence and market leadership (Miller 1996). In a different way, those enterprises whose specialisation is the subject of pre-employment courses (e.g. travel, retail, hospitality) might avoid making any significant contribution to the initial development of employees' skills. Despite conjecture such as this, there appears to be little research which examines how the relationship between enterprises' specialisation and publicly funded provisions influences differences in the contributions made to the initial and further development of workers' skills.

Location

The location of an enterprise also influences the degree by which it may need to invest in training. Isolation, for instance, is a factor which determines decisions about training. In a 1993 report commissioned by the Tasmanian Food Industry Training Board concerning King Island, it was reported that growth of the island's food industries was being hampered by the lack of an integrated vocational education and training system on the island. Considerable cost is involved in accessing training programs off the island and it was recommended that a broad-based open learning facility be established to support the food industry's growth. However, at the time of writing, no progress has been made and when specialist skills are required new staff are recruited from the mainland. Equally, enterprises which are some distance from provincial cities or centres are likely to have to make decisions about how best to furnish their skill development needs. Billett (1994a) recommends that assistance is given to enterprises in Queensland for the development of programs that focus on the particular requirements of individual settings. By encouraging these enterprises, their specific needs and remoteness may be addressed.

Location can have another effect on training. As it is often difficult to recruit workers to country locations, it is necessary to train existing workers to meet skill needs. Baker and Wooden (1995, p. 47) reported that workers living outside capital cities had 16 per cent more chance of participating in in-house training courses than workers living in the major cities.

Discussion

The investment in training by small and large enterprises has been the focus of much inquiry. Consistent findings suggest that the larger the enterprise, the more likely it is to make a significant investment in training. Small business investment seems to be inhibited by the nature of its activities, precipitous viability, beliefs about low skill levels and the lack of incentives for small business workers. Evidence suggests that where a skill gap is recognised, there is a need to rectify the problem. However, the solution may well be found in the labour market, not through an investment in training. The fact that many small businesses are not involved in formal training must be of concern if the objective of training is to make Australian workplaces more productive. This is particularly important when much of this strategy is based on enterprises having a key role in the provision of the nation's skill base. How can these businesses share the benefits of investing in training if they are not involved in the process or feel it has no relevance to them?

There is likely to be ongoing interest by government in the small business commitment to training. However, these findings suggest that unless fundamental shifts occur in the beliefs of small business owners, national goals may remain unfulfilled. Support structures as proposed by Catts (1996) may provide a basis for further activity. Rather than just being persuaded, if small business is able to experience the benefits of training more directly they may well take greater interest. It seems that informal training provisions are common to small enterprises and should be encouraged as an approach to learning which best suits their needs. Further inquiry is required to identify those approaches to informal learning in workplaces which can be modelled to encourage greater participation. Perhaps the work done in Germany, Switzerland and Austria by industry-supported, guild-based training consultants working with small enterprises might be worth examining in greater detail.

The degree to which an enterprise is likely to invest in training is also influenced by its speciality and, in particular, whether there is coincidence between the needs of the enterprise and what VET provisions are available through the publicly funded system. Pre-employment courses provide a ready labour market for some enterprises, while for others apprenticeship programs exist. However, many enterprises' specialisation may fall outside the public provision. Hence, they will have to sponsor their own training provisions. In a similar way, enterprises in remote locations are likely to invest more than their less isolated counterparts. Alternatively, they can recruit rather than train. There appears to be a gap in the literature on these matters and their likely influence on the overall contribution to the nation's training effort.

Enterprises and returns

What are the returns on investment?

It is widely reported that enterprises are interested in the benefits of training securing improved workplace performance. This performance was sought in terms of specific knowledge across enterprises, with large enterprises also showing interest in the capacity of training to deliver more strategic goals related to performance. However, it is particularly important that overall, there are few studies which report enterprise interest in actually seeking out evidence of the benefits of their investment in training. Still fewer are reported to undertake any formal evaluation. Instead, the key source of interest in quantifying such an outcome is government, as evidenced by the number of studies it has sponsored to try and quantify the benefits of training.

Baker and Wooden (1995) report that by far the most common reason that enterprises give for embarking on formal training is to improve work performance. Other reasons given in order of importance were: for multi-skilling; to assist an employee move to a higher position; and to meet the requirements of the now defunct Training Guarantee Scheme. Catts (1996) proposes three primary benefits that enterprises are attempting to secure from their commitment to training. These are to introduce new technology, develop work methods including multi-skilling and develop the personal and interpersonal skills of their workforces.

The Coopers and Lybrand (1996) study of the economics of training in the 15 member States in the OECD finds that the majority of enterprises believe or acknowledge that staff training does bring returns in the areas of:

- productivity improvements
- greater workforce flexibility
- savings on material and capital costs
- a more motivated workforce
- improved quality of the final product or service

Billett (1994a), in a survey of seven enterprises, considered the benefits of training across the areas of production, staff, equipment and work practice. Moreover, training was particularly valued for its ability to secure organisational and strategic goals. In a similar way to the Coopers and Lybrand (1996) report, Carnevale and Schulz (1990) earlier proposed that the benefits of training programs can be considered in three categories: (i) increased revenue; (ii) decreased or avoided expenses; and (iii) intangible benefits. Increased revenue benefits relate to increased output; and decreased or avoided expenses relate to improved quality measured by reduction of scrap, absenteeism, inaccuracy, accidents and wasted time or materials. Intangible benefits are those which are valuable but very difficult to quantify, such as employee flexibility and improved morale.

Yet these lists of outcomes are more intentions than proven benefits, as noted in reports by Burke (1995), Carnevale and Schulz (1990), Davidson et al. (1997), and Coopers and Lybrand (1996). These studies show that there are few reports of cost-benefit analyses of training within enterprises, due to the problem of separating the benefits of training from those attributable to other factors. Billett (1994a) reports that none of the enterprises in his study had any formal mechanisms to equate the expenditure on training with productivity increases. Moreover, when the site-based researchers in this study attempted to do so they met with a lack of interest and a number of administrative barriers. The intended benefits of training are all mentioned in the following studies of enterprises' interest in the outcomes of training, but at issue is the degree to which these are perceptions and beliefs or whether they are based on any form of evidence.

Davidson et al. (1997) examined the approach taken to the evaluation of training benefits in 12 large enterprises. The study identified objectives for the evaluation of training and their distribution across the enterprise. Strategic goals were the ultimate concern and the identification of appropriate performance indicators and practical means for appraising them featured in the data. In common with the aforementioned study, it was noted that the separation of information about the training system from the enterprises' financial systems inhibited cost-benefit analysis (CBA).

Car manufacturer Ford Australia believes that their education and training programs have contributed to the success of the company, measured by positive trends in key performance indicators (KPIs) (Miller 1996). KPIs include improved customer satisfaction, improved productivity, reduced absenteeism and world-wide Q1 ratings in areas of plant operations. Selby Smith and Selby Smith (1996) found that in a study of training's role in implementing restructuring in the Australian Public Service, an improved climate developed between management, staff and unions as a result of the training program.

Misko (1996), reporting on survey responses from 54 businesses, found that the most frequently identified benefit of work-based training related to developing those skills which contributed toward the performance of the core business activity of the enterprise. Other frequently mentioned benefits were related to improved customer service, improved quality and efficiency and improved employer-employee relationships. Misko (1996) also conducted 13 case studies to complement the national survey. The benefits of training most frequently identified among these organisations were an improved occupational health and safety record, increased worker flexibility and productivity, improved customer satisfaction, an enhanced contribution toward organisational goals and a better understanding of the culture of the organisation.

McDonald (1995, p. 8) lists the possible benefits of competency-based training and assessment for enterprises as better quality control for assessing the competence of individuals both at work and before entering the workplace, and buying into the national system of the future. He claims training providers benefit from a more coherent and relevant provision of training and individuals have a proof of competence. The three parties (enterprise, provider and employee) are said to benefit from a better-integrated training, assessment and certification system, the better use of skills of individuals, more effective training and by driving changes in the training system.

Vickery and Wurzburg (1992) reported on the OECD's findings on further education and training. They show that the economic value of investing in new technologies was only fully realised when this investment was supported by the appropriate training of workers using the new technologies and was associated with appropriate changes in work organisation.

Billett (1994a) found that among the enterprises he studied there was a strong consensus that without a training provision, increases in production—by way of the introduction of new equipment, changes in work practices, multi-skilling and continuous improvement—could not be achieved. In addition, it was proposed that training promotes among employees a greater awareness of the change process and, consequently, an improved alignment with the organisation's goals. However, Billett (1994a) states that:

> *training alone is not a sufficient activity for the improvement of productivity or the realisation of a return on a training investment. The benefits of training need to be considered in conjunction with other factors, particularly the nature of work practice, the scope of workers' activities and the decision-making roles afforded to employees.* (Billett 1994a, p.30)

Benefits for enterprises are also being sought from VET programs which improve the capacity of workers to communicate. For example, communication skills training has been increasing in workplaces during the 1990s (Misko 1996) with the benefits derived from these programs reported widely (ALMITAB 1996; DEET 1995;

McQueen 1996). Pearson (1996), in a study of communication skills training in 24 workplaces, claimed to demonstrate the impact of language and literacy training in terms of direct cost savings to enterprises. In addition, this training was reported to benefit enterprises in the form of improved interpersonal skills and performance in those areas which contribute toward the achievement of strategic goals.

Many of the benefits reported above appear to be unintended or unanticipated outcomes which emphasises the difficulty of quarantining the outcomes of training. As discussed below, in a similar way factors influencing those outcomes are unable to be clearly identified and appraised.

In addition to research reflecting enterprise interest in the benefits of the investment in training, other interests are evident. Governments are clearly concerned to gather evidence about cost-effectiveness and getting the best return on investment in VET (Butterworth 1995). For example, the majority of research into the benefits of training, particularly that which seeks to make links between bottom-line profit and training, is sponsored by government. Few enterprise-sponsored studies have been identified. Presumably, the interest by government is twofold: (i) validating policy decisions and (ii) seeking to encourage enterprises to make a larger investment in training.

Government interest in this matter is in contrast to the interests of enterprises who, in the absence of formal evaluations, appear to make judgements about the benefits of training on the basis of faith. Through the studies reviewed here, it seems that the investment by large companies is an act of faith based more on belief than evidence. They believe that training is able to secure complex outcomes in cultural change and the broadening of responsibilities. However, in small business there is a lack of faith with the perception that investment in training will not, overall, be able to resolve problems.

Another group with interest in the benefits of training is the industry trainers themselves. It is claimed that they are increasingly being asked to evaluate their programs and justify expenditure on them (Catts 1996; Carnevale & Shulz 1990; Leimbach 1994; Mountain 1994; Schneider et al. 1992). But deciding what the term 'cost-effective' encompasses and coming up with a means of assessing it is problematic (McDonald 1995). There are differences in expectations of information about returns and what can be measured, judged and appraised. To assist in understanding expectations and limits of valid comprehensive analysis, a number of approaches to and models of cost-benefit analysis are available which differ in their scope.

Approaches to appraising returns

A number of models of cost-benefit analysis (CBA) have been proposed which make different types of claims and vary in scope. Schneider et al. (1992) claim to be able to measure competency before and after training and propose a dollar value to the improved performance. Bartel (1995) used information in a company database to illustrate that training has a positive effect on both wage growth and job performance. Leimbach (1994) proposes a CBA model for training, although acknowledges that in calculating training benefits in dollar terms the value of increased performance is difficult to determine and frequently based on subjective estimates. A range of variables can impact on training effectiveness. These include: the complexity of the training program; the fact that not all programs are designed to have an immediate impact; the number of personnel trained influencing effectiveness where the concepts of the training program involve the whole enterprise; and the issue of the more central a program is to skill requirements, the greater the impact will be.

Smith (1993) reports on factors within enterprises that influence the success of training. These include strategic planning in terms of training, the industrial relations climate, human resource policies, technology and work organisation supportive of training programs. Other factors that might impact on assessing training effectiveness are the ability to transfer learnt skills to the job, on-the-job supervision and positive reinforcement for improved performance (Misko 1996).

Hedges and Moss (1996) examined driver training effectiveness in terms of reduced vehicle operating costs. While financial benefits could be attributed to the training program, the authors realised (like others) that other factors were contributing to the effectiveness of the program. What was thought to be a relatively straightforward study turned out to be a complex task because of the range of variables. The difficulties experienced by Hedges and Moss (1996) and others were that in order to calculate the benefit of investment for a training program, the outcomes measured to assess the return must be causally linked to the training provision (Robinson & Robinson 1989). The failure to be able to account for the range of factors and the degree to which they influence outcomes appears to frustrate claims to be able to measure validly the benefit of training as a 'bottom-line' outcome. Interestingly, most models which claim to be able to achieve this are prescriptions for practice, rather than being tested by practice. Those that have attempted to evaluate the benefits usually report that the complexity of the task and difficulty with controlling variables obscures the provision of sensible findings. Consequently, approaches to assessing benefits which adopt selected or alternate approaches may be useful for specific purposes rather than those which claim to be able to account for all variables.

Mountain (1994) and Pine and Tingley (1993) suggest analysing evaluation data from training programs at the four levels of the Kirkpatrick model (cited in Carnevale & Schulz 1990). These levels are:

- Level 1: participant satisfaction
- Level 2: evidence of knowledge being acquired
- Level 3: participant application of skills back on the job
- Level 4: discernible improvements, in terms of reduced costs, improved quality

Davidson et al. (1997) have developed frameworks which enterprises can use to assess the returns on their investment in training. Their report lists four stages of evaluation: budget evaluation, skills evaluation, project evaluation and strategic evaluation. This study also details six techniques that enterprises can use to assess their return on investment. These are also related to Kirkpatrick's four levels of evaluation. Technique A assesses whether the training program was within the budgeted target, technique B collects information about trainees' reaction to the program, technique C focusses on the competencies gained by trainees and technique D assesses whether trainees apply the competencies achieved to their work. Technique E is a quantitative assessment which provides information on whether the benefits derived from the training program exceeded its cost and technique F links training to the strategic objectives of the enterprise.

Using a selective approach, Pine and Tingley (1993), working with maintenance work teams, chose decreased downtime as the desired measurable outcome to demonstrate a return for a team-building program. They reported that the act of carrying out an evaluation improved management's perception of training. Also, the fact that they were intending to evaluate at Level 4 of the Kirkpatrick model was claimed to have helped them develop more effective training. This approach demanded they work back from the outcome they chose, to demonstrate a return on investment in order to develop a training program which would achieve the desired outcome.

McDonald (1995) argues that there are no models for linking training with the extent of learning, personal benefit, social benefit and, in companies, organisational effectiveness and productivity. Yet, he warns that there can be a danger in assessing training in terms of easily measurable outcomes, since often the most relevant outcomes are those that are the most difficult to measure. Carnevale and Schulz (1990) cite a number of United States companies that evaluate their programs using mainly qualitative data. Billett (1994a) provides a mechanism which organisations could use to make judgements about the direction and focus of their investment in training. This is based on the benefits of training within the four broad areas of production, staff, equipment and work practice and the sub-elements within them which provide a list of priority areas to be considered by enterprises.

Although CBA techniques in whatever form may be useful for trainers to demonstrate value of their programs to management, Lombardo (1989) found they were being used by very few training managers. Two major reasons were advanced for CBA's lack of utility. The first was difficuity in quantifying training benefits such as employee motivation, improved communication techniques and improved self-esteem. The second was an inability to separate the influence of other factors on training performance and the cost of CBA.

There are difficulties in linking a relationship between training and benefits. However, Mountain (1994) and Kenyon (1992) report that the consequences of not evaluating training programs could result in training being seen as ineffective and the current emphasis on enterprise training in Australia being rejected. This warning may be quite timely, as is shown by the evidence of Misko (1996), Callus (1994), Davidson et al. (1997) and Guthrie and Barnett (1996).

The findings above suggest that approaches to evaluation which might not be comprehensive but can offer some account of returns may well be useful to relay the benefits of training to enterprises.

Discussion

There appear to be differences between those returns being sought by government and those that are actually able to be identified by enterprises or which they are interested in identifying. Whereas government is more interested in evaluating the impact of its policy decisions, enterprises are interested in whether training can provide specific provisions associated with goals of skill development, change and improving the morale and involvement of its workers.

There is not much evidence of interest from enterprises to secure detailed statements of returns accruing from training (Billett 1994a; Deloitte 1989, cited in McDonald 1995; Misko 1996; Davidson et al. 1997). Four types of returns have been identified in the literature. These are:

- 'bottom-line' profit
- direct influence on productivity
- securing strategic or organisational change goals
- contribution to the community

However, there are quite distinct differences in the interest and expectations about identifying these returns. The relationships between 'bottom-line profit' and training is not attracting a lot of interest from enterprises. Yet government has a keen interest at this level, presumably to substantiate policy decisions and encourage wider investment in the nation's workforce by the private sector.

Productivity increases arising from training were the focus of some studies, with the literature revealing alternatives between limited (e.g. Dockery et al. 1996) vs comprehensive models (e.g. Billett 1994a; Carnevale & Schulz 1990; Davidson et al. 1997). Securing strategic goals through training includes reduced wastage, reduced absenteeism, less accidents, improved staff morale, quality improvement, multi-skilling, enterprise bargaining arrangements etc. (Billett 1994a). Although the study by Davidson et al. (1997) provides a set of techniques for evaluating the returns to enterprises on their investment in training, the evidence suggests that enterprises lack the interest and/or expertise to use such approaches.

Contribution to community was not a widely reported concern. However, a study of the cost to employers of apprenticeship training (Dockery et al. 1996) reported that employers did not only describe the benefits of employing apprentices in economic terms. Employers felt obliged to contribute to training in their industry and thus the supply of tradespersons. They also wanted to give young people an opportunity. In a study of OECD countries, Coopers and Lybrand (1996) claim a general benefit accrues to the community from a more educated workforce. This occurs in the form of greater social cohesion, enhanced environmental awareness, improved health and an improved quality of life for individuals. Their report states that such benefits are very important and must be considered when governments and enterprises make investment decisions.

Noting what has been stated by Coopers and Lybrand (1996), it is important to separate national goals from those of enterprises. What is best for Australian industry nationally, in the form of vocationally educated and trained workers, may not be the same as industry's perceived needs for enhancing productivity (Sloan 1994; Yeatman 1994). Wolf (1996) states that vocational training systems must include a mix of skills from the categories of generic foundation skills development and industry or occupation-specific skills, in response to current needs and some specific skills development for the future. Wolf (1996) has shown across OECD countries that employers will pay for current specific skills and some generic skills in order to achieve their core business goals. However, young people setting out to secure employment will choose training which will develop generic skills to maximise job opportunities and adults will want to develop a mix of skills. Wolf (1996) stresses the need for society to ensure that generic foundation skills, industry/occupation-specific skills and specific skills for the future are all developed. Society must bear the cost of ensuring that this occurs in order to meet the demands of the future.

As Moran stated in 1993:

> *We are at a critical point in the development of vocational education and training in Australia. Australians are coming to realise that if we focus on Australia's longer term interests, we can achieve a commitment to develop common goals and national plans.* (Moran 1993, p.9)

However, the research reviewed for this chapter does not reflect this optimism. Rather, enterprises are emphasising their more immediate and specific needs. The degree to which the development of skills is aligned to creating an adaptable national workforce appears, at best, to be coincidental.

From the work identified and appraised in this review, it could be advanced that the twin policy goals of increasing the quantum of training and securing the sponsorship of that training by enterprises are not being realised.

It may be necessary to reconsider policy directions about providing support in order to achieve these national goals. Support may be needed for those enterprises which are contributing to the development of the nation's workforce. This may be particularly necessary in those areas which are of emerging national interest and where the expertise and infrastructure for this development is unavailable within the nation's training system.

Findings and directions for further research

This summary synthesises the findings from the body of the chapter and presents a series of statements with a policy orientation highlighting those areas which may be selected for further research. Guiding this analysis is the view that government interest in investment by enterprises in vocational education and training (VET) is linked to dual policy goals. These include attempting to increase the quantum of national VET activity and seeking for the cost of that provision to be borne by the enterprises who derive benefit from VET. Reference to VET in this paper encompasses both 'formal' (e.g. participation in accredited courses or courses organised by enterprises) and also 'informal' (e.g. learning on the job) provisions, although the majority of the research has focussed on surveys and case studies of formal provisions.

The analysis of recent research in this summary is presented under two headings: 'Enterprises and investment', and 'Enterprises and returns'.

Enterprises and investment

Not all enterprises make the same level of investment (contribution) to VET, with size, specialisation and location being variables which influence different levels of contribution. While dealt with separately, these variables are interdependent.

Size

A synthesis of recent research indicates that, across enterprises, the investment in 'formal' training lacks uniformity, with larger enterprises carrying a higher level of burden than smaller enterprises. The evidence suggests that medium and large enterprises are typically engaged in making contributions to VET. Admittedly, this evidence usually reflects 'formal' VET provisions and may not fully account for the 'informal' VET provisions which occur in both small and large enterprises. Factors such as required level of skills, lack of incentive, other priorities and a preference for recruitment rather than training are proposed as reasons why smaller enterprises do not invest heavily in VET. A contributing factor is also the lack of knowledge within small business about training activities and networks. Given governments' ongoing interest in small business, further research is required to examine how these impasses can be overcome. This inquiry would benefit from examining the local-regional professional/occupational support strategies that have been adopted in countries such as Germany and Austria.

Specialisation

Enterprises are required to make different levels of contribution based on their specialisation. The training needs of some are furnished by existing publicly funded VET provisions, which are dominated by particular industry groupings (e.g. metals, construction, hospitality). These enterprises are required to make a different (lower) level of contribution than those whose specialisation is not catered for in the VET sector. Apart from equity, this situation may result in enterprises within strategically important or emerging industries (e.g. graphic design, software application, secondary processing, copper refining) being expected to make higher levels of contributions to VET. This inhibits these provisions and makes them increasingly enterprise specific. That is, the development of the skills which are a national priority may be inhibited. Equally, inequities in demands upon enterprises may well suppress levels of VET activity. An issue for national policy arising from this is whether the different levels of investment expected of enterprises influence their contribution to training. Also, how does this influence VET provisions in emerging and important strategic industries? Are national VET goals best addressed by arrangements which favour one sector over another? This area is under-researched.

Location

Access to publicly funded VET provisions is not evenly distributed. Hence, the location of enterprises is likely to influence their contributions to VET. For example, enterprises in remote locations or away from appropriate publicly funded VET programs may have to make a higher level of contribution or else recruit the required skills from the labour market. Given that a number of the nation's major industries are found in remote localities, this may well be an inhibiting factor in their willingness to invest in VET provisions. However, it seems that they will invest when training is needed to achieve core business activity. Like specialisation, the effects of location on an enterprise's contribution to training remains under-researched.

In sum, enterprise investment in training is focussed on those skills and knowledge which are relevant to their particular enterprise's needs. This is understandable. However, the outcome will be the development of specific skills and knowledge which may inhibit transferability to other enterprises or situations. This finding suggests that with the increased emphasis on enterprise training of the nation's workface, severe imbalances may occur associated with the focus and distribution of the load of that task. Significantly, the government's policy strategy may be weakened by emerging evidence of a reduction in the interest in training by enterprises. Recent research indicates that few enterprise-bargaining agreements make mention of training provisions and fewer still mandate structured training arrangements. Hence, if participation is not part of conditions of remuneration and advancement, the impetus for participation in VET may dissipate. Together, these findings suggest that key government policies over the last decade have failed to have the desired impact—i.e. enhancing the quantum of VET and its sponsorship by enterprises.

Therefore, questions emerging from this analysis are:

- In what ways does the different level of training investment required by enterprises influence their commitment to training?
- What is the impact upon national VET when publicly funded VET arrangements favour particular industries over others?
- What are the long-term national consequences of investment in training which is at a low level and is enterprise specific?
- How can the burden of the development of skills required for national goals best be shared in ways that encourage the investment in skill development by enterprises?

These questions are not addressed by current research.

Enterprises and returns

Interest in securing information about the returns on investment in training differs widely. Government appears more interested in a cost-benefit analysis (CBA) than enterprises. The sponsorship of research in this area reflects concerns with justification and evaluation of government policy. For instance, the term 'investment' used in this study and widely elsewhere is associated with the policy goal of providing evidence that enterprises get a return on their investment. However, the review identifies little interest by enterprises in securing detailed information about returns on training expenditure. Where it exists, enterprise interest in its investment in training is diverse. For example, there is some evidence that large enterprises are more likely to be interested in VET securing strategic shifts (e.g. multi-skilling, quality improvements) than precise and detailed accounts of returns. Enterprise decisions about investment in VET are often handled as an annual budget item, or as an act of faith, without any cost-benefit analysis. Smaller enterprises appear to reflect a belief that their investment in training would not be worthwhile, perhaps due to experience of irrelevant training not specific to their enterprise. This may explain their reluctance to participate in VET. In overview, these enterprises fail to see the benefits of investment in VET, let alone have any interest in quantifying that expenditure. Industry trainers have particular interest in demonstrating the benefits of enterprises' investment in training. However, the evidence is that they or anybody else in enterprises rarely has or uses the expertise of cost-benefit analysis (CBA).

Various models of CBA are proposed in the literature. They can best be categorised by the scope of their analysis. That is, there are those which use a few variables (e.g. participant satisfaction, relevance to workplace activities) to arrive at conclusions about returns. Other models are proposed which claim to account for all the variables which influence productivity or bottom-line effects. The studies that have addressed this question overwhelmingly agree that it is either impractical or impossible to account for all the variables which influence return on investment in a way that is valid. The consensus is that there are too many compounding and contradictory variables to suggest sensibly that returns can be quantified in terms of a bottom-line profit. Articles proposing a comprehensive approach tend to be prescriptions for practice, rather than being based in practice. The exceptions offer analyses which are far from being comprehensive. Those studies reporting the complexity of the task are usually the product of empirical activities. Given the lack of interest by enterprises in quantifiable

CBA, models which measure returns of a few important variables may be welcomed. Arising from this review is the need to provide models of calculating benefits which address those variables in which enterprises are interested.

Perceptions about the value of VET are the key factor in determining the degree of investment. Acts of belief more than evidence appear to be driving decisions about investment in both large and small enterprises. So, further inquiry is required to address the task of changing the belief within smaller enterprises that investment in training is not worthwhile. Such perceptions are likely to change when specific and tangible examples are available. If such perceptions cannot be changed, a policy focus may need to consider how to address the danger of imbalance and erosion of the national capacity of VET by placing too great a responsibility on enterprises. Given the recent data about low levels of interest in formal training structures being included in enterprise agreements, this concern may be both pertinent and critical.

Questions emerging from the analysis of the literature on returns to enterprises from their investment in training include:

- How best can barriers which inhibit investment in training by small business be overcome?
- If low levels of investment in training by small business continue, what approaches need to be implemented to maintain and increase the nation's quantum of training activity?

80

In sum, a great deal of research has been sponsored to understand factors which determine how and why enterprises invest in training. Further work is required to determine the consequences of the uneven level of investment that is required of enterprises, using variables such as those referred to above (e.g. speciality and location). More work also needs to be done to gauge the consequences of placing a key role for developing the nation's work skills on enterprises who indicate flagging interest. Also, the national consequences of the development of enterprise-specific knowledge require appraisal. Moreover, there are gaps in finding appropriate strategies to encourage broader participation by both large and small enterprises. In particular, the strategies which should be adopted to change the perception of training within small business remains unclear.

References

ABS (Australian Bureau of Statistics) 1993, *Small business in Australia 1993*, ABS Catalogue no. 1321.0.

ALMITAB (Australian Light Manufacturing Industry Training Advisory Board) 1996, *Grenadier coating, innovation at work*, ALMITAB, Carlton, Victoria.

Baker, M & Wooden, M (eds) 1995, *Small and medium sized enterprises and vocational education and training*, report to ANTARAC, NCVER, Adelaide.

Bartel, A P 1995, 'Training, wage growth, and job performance: Evidence from a company database', *Journal of Labour Economics*, vol. 3, no. 3, pp. 401–425.

Billett, S 1993, 'What's in a setting—learning in the workplace, *Australian Journal of Adult and Community Education*, vol.33, no.1, pp. 4–14.

—— —— 1994a, *Cost benefits of training: A Queensland study*, Queensland Training Officers' Society.

—— —— 1994b, 'Situated learning—a workplace experience', *Australian Journal of Adult and Community Education*, vol. 34, no. 2, pp. 112–130.

—— —— 1996, 'Towards a model of workplace learning: The learning curriculum', *Studies in Continuing Education*, vol. 18, no.1, pp. 43–48.

Burke, G 1995, 'Some aspects of the economic evaluation of vocational education and training', in *The economics of education and training*, eds F Ferrier and C Selby-Smith, AGPS, Canberra.

—— —— McKenzie, P, Maglen, L, Selby-Smith, C, Ferrier, F & Selby-Smith, J 1994, *The economics of vocational education and training in Australia: A review of recent literature*, report to ANTA from the Centre for the Economics of Education, Monash University, Melbourne.

Butterworth, P 1995, 'The economics of vocational education and training: Throwing down the gauntlet', in *The economics of education and training*, eds F Ferrier and C Selby-Smith, AGPS, Canberra.

Cabalu, H, Doss, N & Dawkins, P 1996, *Employers' compliance costs*, Centre for Labour Market Research, Curtin University of Technology.

Callus, R 1994, 'Research priorities in small business', a discussion paper from the *Research priorities in vocational education and training* conference, NCVER, Adelaide, pp. 15–31.

Carnevale, A P & Schulz, E R 1990, 'Return on investment: Accounting for training', suppl. to *Training & Development Journal*, July 1990.

Catts, R 1996, *'Validating training benefits in the workplace'*, Vocational Education and Training Research Institute, University of Southern Queensland.

Coopers & Lybrand 1994, *TAFE NSW, training-practices and preferences of small businesses in Australia: A report for vocational education and training providers*, Coopers & Lybrand, Sydney.

—— —— 1996, 'The economic dimensions of education and training in the member states of the European Union', http://www.transcend.co.uk/eyll/ideas.htm.

Curtain, R 1996, 'Skills for small, high tech exporters: Overcoming the transition problem', in *The economic impact of vocational education and training*, Monash University-ACER Centre for the Economics of Education and Training, AGPS, pp. 170–178.

Davidson, J, Doucouliagos, C, Macneil, J, Rimmer, M, Sgro, P & Watts, L 1997, *Return on training investment*, Office of Technical and Further Education–Australian National Training Authority.

DEET (Department of Employment, Education and Training) 1995, *Bartek fabrics, finding solutions: Language and literacy training at Bartek Fabrics*, DEET, Canberra.

Deveson, I (chair) 1990, *Training costs of award restructuring*, report of the Training Costs Review Committee, AGPS, Canberra.

Dockery, A M, Koshy, P & Stromback, T 1996, *The cost to employers of apprenticeship training in Australia*, Centre for Labour Market Research, Curtin University of Technology, WA.

Dore, R P & Sako, M 1989, *How the Japanese learn to work*, Routledge, London.

Guthrie, H & Barnett, K 1996, *Training and enterprise bargaining*, NCVER, Adelaide.

Harris, R 1996, *Getting to grips with workplace training*, NCVER, Adelaide.

Hedges, P & Moss, D 1996, 'Costing the effectiveness of training, case study 1—improving Parcelforce driver performance', *Industrial and Commercial Training*, vol. 28, no. 3, pp. 14–18.

Kenyon, R 1992, 'Putting a price on productivity', *Australian Training Review*, vol. 5, Dec 1992–Jan 1993, pp. 9,37.

Leimbach, M P 1994, 'A return on investment model for evaluating training', *Training and Development Australia*, vol. 21, no. 1, pp. 5–7.

Lombardo, C A 1989, 'Do the benefits of training justify the costs?', *Training and Development Journal*, vol. 43, no. 12, pp. 60–64.

McDonald, R 1995, *'Costing training and assessment-issues paper*, Assessment Centre for Vocational Education and Training, Sydney.

McQueen, J 1996, 'Changing focus: Communicative practice in the workplace', *Literacy Now*, no. 2, Nov/Dec, pp. 2,3,18.

Miller, N 1996, 'Education and training at the Ford motor company', in *The economic impact of vocational education and training*, eds C Selby-Smith and F Ferrier, Monash University-ACER Centre for the Economics of Education and Training, AGPS, pp. 197–201.

Misko, J 1996, *'Work-based training, volume 1, Costs, benefits, incentives and best practice'*, NCVER, Adelaide.

Moran, T 1993, 'Meeting the challenges in vocational education: ANTA and the new national policies', *Unicorn*, vol.19, no.4, Nov, pp. 9–18.

—— —— 1994, 'Response to papers delivered on "The context of research in Australia"', *Research priorities in vocational education and training—a discussion*, NCVER, Adelaide, pp. 262–272.

Mountain, B 1994, 'Evaluating and analysing', *Australian Training Review*, March/April/May, no. 10.

Pearson, G 1996, 'More than money can say', *Literacy Now*, no. 1, Sept/Oct, pp. 5,11.

Pine, J & Tingley, J 1993, 'ROI of soft-skills training', *Training*, Feb 1993, pp. 55–60.

Robinson, D G & Robinson, J 1989, 'Training for impact', *Training and Development Journal*, vol. 43, no.8, pp. 34–42.

Savellis, R 1995, Australian industry: Learning to learn, *Australian Training Review*, Dec 95/Jan/Feb 96, no. 17, pp. 6–8.

Schneider, H, Monetta D J & Wright, C C 1992, 'Training function accountability: How to really measure return on investment', *Performance & Instruction*, March 1992, pp. 12–17.

Schofield, R 1994, 'Response to papers delivered on "Research into small business"', *Research priorities in vocational education and training—a discussion*, NCVER, Adelaide, pp. 32–35.

Selby Smith, C & Selby Smith, J 1996, 'Training's role in implementing the restructuring of office based work in the APS', in *The economic impact of vocational education and training*, eds C Selby-Smith and F Ferrier, Monash University-ACER Centre for the Economics of Education and Training, AGPS, pp. 209–233.

Sloan, J 1994, 'Costs and benefits of vocational education and training', paper from the *Research priorities in vocational education and training conference*, NCVER, Adelaide, pp. 129–167.

Smith, A 1993, 'Training and enterprise performance: Is there any link?' *Training Agenda*, vol.1, no. 3, pp. 24–27.

—— —— 1997, 'Making false assumptions: Examining some popular preconceptions about enterprise training', *Australian Vocational Education Review*, vol. 4, no. 2.

Tasmanian Food Industry Training Board Inc. 1993, *King Island food industries analysis*, TFITB Inc. Devonport, Tasmania.

Vickery, G & Wurzburg, G 1992, 'Intangible investment—missing pieces in the productivity puzzle', *OECD Observer*, Oct/Nov 1992, pp. 13–16.

Wolf, A 1996, *The dilemma of qualifications in the workplace: What should employers pay for?*, Making a difference seminar series, Assessment Centre, Sydney.

Wooden, M 1997, 'Employer knowledge of, and satisfaction with, ITABs: Survey evidence', *Australian Vocational Education Review*, vol. 4, no. 1, pp. 38–51.

—— —— & Baker, M 1996, 'Small business and the dollars and sense of training', *Australian Training Review*, Mar/Apr/May 1996, no. 18, pp. 4–5.

Yeatman, A 1994, 'Who costs, who benefits?', paper from the *Research priorities in vocational education and training conference*, NCVER, Adelaide, pp. 115–128.

4 Vocational education and training and small business*

Jennifer Gibb

Context

THIS CHAPTER SUMMARISES the published findings of research projects undertaken in the area of small business and vocational education and training (VET) in Australia since 1990. It starts with the definition of small business and includes an overview of why this area is an important focus for research activity in VET.

The remainder of the report is devoted to analysing the major areas of research activity in small business and VET and identifying topics which have yet to be addressed. The research activity is summarised under six headings:

- role of government
- approach to training
- delivery modes suitable to small business
- information and networking
- credibility and quality of training
- equity

---

* This chapter is a reprint of Gibb, J 1997, *VET and small business*, Review of research, National Centre for Vocational Education Research, Adelaide.

These six headings represent the key elements of the Small Business Training Policy Framework which the Australian National Training Authority (ANTA) developed in 1996. This framework is a useful tool for categorising types of research identified in the literature reviewed for this chapter. For convenience, the explanation of each element is included at the beginning of each section.

The purpose of the policy framework was:

> *for the small business sector to take an active partnership role in meeting its training needs and to create an environment in which training and lifelong learning is recognised as being vital to the competitiveness and survival of small business.* (ANTA 1996, p. 5)

Definition of small business

The Australian Bureau of Statistics (ABS) uses the definition of small business first developed in the 1990 report by the House of Representatives Standing Committee on Industry, Science and Technology (known as the Beddall report). This report includes management and organisational characteristics in its definition. Thus, a business is regarded as small if it is independently owned and operated; if it is closely controlled by owners/managers who also contribute most, if not all, of the operating capital; and if the principal decision-making functions rest with the owners/managers. However, superimposed on these characteristics are two additional factors—size and industry type. In terms of size, non-manufacturing industries employing less than 20 employees and manufacturing industries employing less than 100 employees are regarded as small. An exception to this rule is the agricultural industry, because agricultural businesses can have large-scale operations with relatively few permanent employees. The ABS has developed a measure of the Estimated Value of Agricultural Operations (EVAO) based on area of crops sown, number of livestock and crops produced and livestock turnoff (mainly sales) during the year. A small agricultural business is defined as one having an EVAO of between $22 500 and $400 000.

A major sub-set of small business is 'very small business' or 'micro business', which the ABS (1995) defines as those businesses with less than five employees.

Small business statistics

The ABS produced statistics on small business in 1988, 1990, 1993 and 1995. The most recent of these, *Small business in Australia*, describes the small business structure and State distribution of small business. It also provides an overview of very small business and own account workers; and selected statistics on bankruptcies, earnings, labour costs, research and development, innovation and training expenditure. In addition to these reports, the ABS has published *Characteristics of small business in Australia* (1996a) and *Persons employed at home* (1996b).

The ABS (1995) reported that in 1994–95 there were about 786 000 small non-agricultural businesses in Australia and 95 000 small agricultural businesses. These 881 000 small businesses employ 2.9 million people and account for 97 per cent of all private sector businesses, 51 per cent of all private sector employees and around 33 per cent of Australia's gross domestic product. In the past 10 years, employment in small business has grown at an average annual rate of 3.6 per cent. According to the Department of Industry, Science and Technology (DIST) *Annual review of small business* (1995), small business employment as a share of total employment (including the public sector) has risen from 39 per cent in 1985–86 to 45 per cent in 1993–94.

Field (1997) points out that females make up a significant proportion of small business employees in many sectors—accommodations, cafés and restaurants; finance and insurance; property and business services; education, health and community services; cultural and recreational services; and personal and other services. He also draws attention to the non-employing sector which constitutes 24 per cent of the total non-agricultural, private sector's small business workforce.

There are three types of people working in small business:

- employers—that is, those working in their own business with employees (ABS 1995, p. 3)
- own account workers—that is, those who operate their own business or engage independently in a profession or trade as a sole proprietor or partner without employees (ABS 1995, p. 57)
- employees

A fundamental set of questions for the VET system is:

- What are the vocational education and training needs of all three types of people working in small business?
- Can the VET system meet these needs?
- How can the VET system meet the needs of businesses that employ less than five people?

In terms of training expenditure, the statistics in the ABS reports (1995) are derived from the 1993 employer training expenditure survey for the private sector. Training expenditure includes wages and salaries and other expenditure on formal training which is defined as 'training activities which have a structured plan and format designed to develop job related skills and competence' (ABS 1995, p. 93).

The statistics on training expenditure reveal that 18 per cent of small business employers report some training expenditure, compared with 79 per cent of employers who employ 20–99 people
0.1 and 97 per cent of employers who employ more than 100 people. Thus, it appears that 82 per cent of small business which accounts for over 50 per cent of private sector employment does not spend money on training.

Field (1997) points out that this figure could be explained in others ways: small business managers may not report the training they do; they may have a restricted notion of training; or they may not be as good as large business at recording all their training costs.

Field puts forward the following reasons why there is not much training taking place in small business:

- number of low skill firms in the small business sector

- little or no incentive for promotion in-house and therefore incentive to upskill is less
- concept of training used in training studies reflects big business or bureaucratic concepts and assumptions
- small business is less likely to employ young people and more likely to have older employees with reasonable skills already
- many employees are part-time
- large proportion of employees in small business are women who for a variety of reasons have difficulty attending structured training
- a large proportion of the work can be routine
- small business owners may have little interest in expanding their businesses
- employee's attitude and control of cash flow are seen as more significant than skills
- small businesses assume government schemes are an imposition and this may affect their attitude to VET
- some small businesses compete on the basis of low cost and flexibility rather than quality and customer service and these firms may prefer to employ low-skilled casual workers

The challenge for research in VET is to find out more about the people who work in the 82 per cent of small businesses which do not spend money on training: how do they gain their skills and knowledge; how should the training system adapt in order to 'sell' its services to this group; and does it, indeed, need to?

Role of government

According to the Small Business Training Policy Framework (ANTA 1996), it is the role of government to:

- *develop and promote a culture of lifelong learning—across all levels of education and training and involving all industries*
- *encourage small business to invest in training that represents value for money in terms of relevance, approach and delivery methods*
- *establish and maintain, with industry, an appropriate framework for funding to support the provision of training*

- *create an environment with appropriate regulatory and administrative frameworks* (ANTA 1996, p. 9)

Major reports

Since 1990, the government has commissioned several major reports on small business and these have included sections on training or been devoted entirely to training issues:

- *Small business in Australia: Challenges, problems and opportunities* (the Beddall report 1990)
- *Advices of the Employment and Skills Formation Council July 1988–June 1990* (Employment and Skills Formation Council 1990)
- *Small business review* (Bureau of Industry Economics 1991a)
- *The shape of things to come: Small business employment and skills* and three supplementary reports on women in small business, rural communities and disabled people and small business (Employment and Skills Formation Council 1994a)

All these reports focus on the issue of skill development as one way of improving performance and promoting growth in small business. They also include recommendations about how better to meet the training needs of those in small business.

The Beddall report (1990) was the first inquiry into small business undertaken by a Federal Parliamentary Committee. It covered a wide range of issues including regulation review, taxation reform, trade practices and management education and training. The report noted that the lack of managerial skill of the owner/manager was a major factor in inhibiting the success of small business. This report put forward four recommendations related to management education and training:

- Small business management education should be established as part of the curriculum for secondary education and apprentice training.
- State small business development agencies should liaise with industry trade and professional associations to develop industry-specific management education and training.
- National small business information and awareness programs should expand the program of integrating small business advisory

services with private sector agencies more regularly in contact with small business.

- Approved training funds should include provision for training needs of the self-employed and employees in small business.

The research reported in the Employment and Skills Formation Council (ESFC) report (1990), *Advices of the Employment and Skills Formation Council July 1988–June 1990*, supported the conclusions which the Beddall report made regarding small business management education and training. In addition, it sought to provide advice regarding strategies to improve the quality of training undertaken by small business. This report drew attention to:

- the importance of training and its contribution to small business success
- the failure of the training system to meet small business needs, noting that it was more suited to meeting the needs of larger enterprises
- the need for small business employees to receive training
- the need to recognise that skills in small businesses are developed informally
- the need to strengthen the existing business development networks used by small businesses

The Bureau of Industry Economics (BIE 1991a) undertook research to determine:

- the impact of formal education and management training on survival of small business
- the current state of small business training in Australia
- the policy options for small business management training
- employee training

The BIE found that:

- Suppliers of training needed to pay more attention to marketing their products.

> *The recurring theme is the need for small business management training to be market driven—to understand and meet the needs and preferences of its potential clients.* (BIE 1991a, p. xix)

- Suppliers of training had to meet the need for professional trainers and consider carefully the question of cost, venue, industry needs, training methods and scheduling of training.

  > *Suppliers must more accurately understand the driving force in all small firms (owner/manager), the small firm itself and its training needs and act upon such matters as trainer competence, training methods, location, timing and price in marketing their products.* (BIE 1991a, p. 70)

- Accountants and bank managers are the sources of advice most sought after by small business managers/owners.
- Managers with more extensive technical education and those with business/management education are more likely to have small businesses that survive.
- Small businesses tended to provide significantly less formal training than large businesses. The BIE hypothesised that small firms may be compensating for this by providing large amounts of informal training. However, the BIE was not able to find evidence to support this hypothesis.
- The disincentives to training in small business included cost of training, quality and relevance of training offered to them, ease of recruiting people with requisite skills and the fact that many employees were not full-time or permanent.

As will be seen throughout this chapter, these findings have subsequently been repeated in a number of later research reports.

The ESFC (1994a) report, *The shape of things to come*, focussed on a broad approach to skills development, including diagnostic services, advising, mentoring, business development and education and training. The distinctive feature of this report was that it conducted research into small business and how this sector could lead to employment growth.

In addition to these studies, there have been major reports on management skills in general: *Australian mission on management skills* (Commonwealth of Australia 1991); and *Enterprising nation* (Industry Taskforce on Leadership and Management Skills 1995), known as the Karpin report. These provided research into community attitudes to small business; a review of training needs of small business; a review of training evaluation and effectiveness; the *effectiveness of small business training programs; and evaluation of* network approaches to small business training and development.

The federal government has responded to the concerns of the small business community by establishing the Small Business Deregulation Task Force, which has produced its report *Time for business* (1996). This report makes recommendations about how to reduce the paperwork and compliance burden imposed by governments on small business.

Practical measures to make entry-level training easier for small business

Through the Australian National Training Authority (ANTA), small business Nettforce companies have been set up. In addition, group training companies —which allow small business to participate in the training of apprentices and trainees while not incurring the full costs of direct employment—have been supported and expanded. In one of its appendices, the ESFC (1994a) lists the full range of government programs of relevance to small business including those funded by the Department of Industry, Science and Tourism (for example, the National Industry Extension Service [NIES], Enterprise network programs, State and Territory small business advisory services and business enterprise centres). It also includes the Australian National Training Authority and Department of Employment, Education and Training (for example, community-based programs, enterprise-based programs and labour market programs).

In May 1997, the Minister for Schools, Vocational Education and Training announced that the government would pilot 18 one-stop apprenticeship shops which will handle all training arrangements for employers for free. These shops will make it easier and faster for an employer to take on apprentices and trainees and for a young person to gain an apprenticeship, particularly in the high technology industries. These companies are to be managed by industry and will combine the expertise and efforts of business groups, employers, the Chamber of Commerce and training departments in the States/Territories. There are plans to evaluate the pilot shops within six months.

ANTA's reaction to small business

The Australian National Training Authority (ANTA) has identified small business and vocational education and training as one of its research priorities since 1994. In addition, ANTA makes it a requirement that each industry and State training profile includes a section addressing small business training needs and arrangements.

ANTA held three national forums on small business training issues in 1995–1996 and is shortly to release its strategy for small business vocational education and training. After its second forum in July 1996, ANTA published a small business training policy framework which is the basis for the National Small Business Strategy.

In 1996, ANTA introduced an award for 'small business of the year' in recognition of excellence in commitment to training and development of the workforce.

Developments in the States/Territories

With regard to individual States/Territories, there are small business advisory services and 'business in the community' enterprise centres in each of the States and Territories. In addition, in 1997 Queensland established a 13-member committee to advise the government on small business training needs and to encourage the development of a training culture within the sector.

Further research

The government has played a significant role in researching small business and management education and training and in setting up schemes to encourage small business to take on trainees. However, there is a need to continue to evaluate the effectiveness of these programs and schemes. Are they meeting the needs of small business? Is small business responding? Is small business becoming better managed and employing more people? Are small business owners and employees using the new skills and acquired knowledge they gained in training and is the business benefitting?

Furthermore, is small business training market driven? Are training providers using competency standards and flexible delivery approaches to better meet the needs of small business?

One research topic suggested by Callus (1994) that relates to the role of government is to find out the application and relevance of the training reform agenda to workers in small business.

Field (1997) undertook an exploratory investigation into training and learning in small business. He makes the point that 'very little of the learning that occurs in small business results from structured training' (p. 2).

Field argues that finding out more about how small business trains and learns is crucial not only for small but also for large business. He believes that many large but non-traditional organisations in turbulent environments have tried hard in recent years to become more like small business. He feels that training reform has concentrated on meeting the needs of large traditional organisations in stable environments:

> *Few small businesses have specific budget allocations for training, and many regard both the national training agenda and external training programs as irrelevant.* (Field 1997, p. 7)

Field states: 'we feel that research should challenge the conclusion that if not much training is happening in small business . . . then there is not much learning either' (p. 12).

Another area of research focussing on the role of government looks at the practical steps required to create and promote a culture of lifelong learning in small business where the main concern of the owner is to make a living.

In his research on the value for small to medium-sized enterprise owners of investing in staff training, Catts (1996) recommended that there is a role for government in promoting the notion of the training culture in small enterprises. This could be achieved through providing them with an initial consultancy service, which would offer needs analysis and a limited initial training service for firms seeking to trial the use of training to upskill existing staff. This may mean identifying best practice in informal training and drawing lessons from this.

It will also be important to investigate other funding and administrative arrangements that would make the training system better able to respond to the needs of small business.

Approach to training

According to the Small Business Training Policy Framework (ANTA 1996):

> *Small business training in VET will build on and extend creative client provider partnerships.*
>
> *Small business can select an approach to training that is relevant to their skill needs and targetted at identified needs in relation to short, medium, and long term goals. Training will be cost and time efficient, engender business confidence and make use of VET initiatives such as flexible delivery and user choice.* (ANTA 1996, p. 7)

In terms of an approach to training that suits small business, considerable research activity has been devoted to identifying and noting the barriers/disincentives to small business being involved in training (BIE 1991a, 1991b; Coopers & Lybrand 1994; Industry Taskforce on Leadership and Management Skills 1995 [known as the Karpin report]; Baker & Wooden 1995). There has also been research conducted into training needs of managers, summarised in the

Karpin report (1995) and, more recently, some research activity has been devoted to the training needs of employees. Much of the research restates the needs of small business regarding the approach to training but there is no research on the extent to which training providers are delivering what small business wants. Underpinning any approach to training is the need to understand and take account of the diverse nature and scale of small business operations.

Barriers

In 1991, the Bureau of Industry Economics noted that there were two types of barriers to small business training: a lack of awareness by small business of the benefits to be derived from training; and inadequate provision of training which small business operators would choose to undertake.

On the demand side, disincentives identified by the Bureau of Industry Economics include:

- cost
- concerns about quality and relevance
- lack of knowledge of training availability
- ease of recruitment of people with relevant skills
- modest skill requirements
- a large proportion of the workforce which is not employed on a full-time permanent basis

The 1994 Coopers and Lybrand report suggested that small business experienced both conscious barriers and unconscious barriers to training. The conscious barriers related to the perception by small business that training is not relevant, too theoretical and not industry specific; the unconscious barriers included the attitude that training is not valuable and does not provide benefits to small business.

The Karpin report (1995) provided an overview of literature since the 1980s, describing why small business is resistant to training and the failure of training providers to meet its needs. Amongst the reasons were the fact that training programs were too general and not targetted to small business needs, small business lacked conviction that training was useful, and the usual issues of time, quality of training and cost.

- There is a concentration of low skill jobs in small firms.
- Informal methods of training are the most predominant method of training in all firms, irrespective of their size.
- While small and medium-sized enterprises (SMEs) are less likely to provide formal training, of those that do, external training is favoured (particularly technical and further education [TAFE] sector training) over in-house training.
- SMEs are more likely to have individuals with requisite skills rather than train existing staff.
- SMEs tend to use informal methods to determine the training needs of their staff—usually the manager/proprietor decides what these are.
- The main factors which cause small firms to provide less formal training than large firms are:
  - greater concentration of jobs with low skill requirements within small business sector
  - importance of economies of scale in provision of formal training
  - small firms rely more heavily on external training which is likely to be more general and portable than in-house training and small firms are less likely to bear its cost
  - greater likelihood of business failure and lack of extensive internal labour markets in small business reduce the incentive to invest in formal training
- Time and cost are more likely to be cited by small firms as factors which limit the provision of formal training.

Baker and Wooden (1995) suggest that the focus on formal, structured and accredited training is misdirected from the point of view of small business. They also suggest that since TAFE is the most important provider for this sector, it should improve and increasingly focus on the needs of these clients in the provision of VET. TAFE needs to consider issues of access and client satisfaction and relevance among this group.

Research undertaken by Robertson and Stuart (1996) sought to investigate further why small business owners provide less training than large businesses. They found that small business focusses on short time horizons and does not have the flexibility afforded by larger budgets. In addition, small business owners do not have the time to analyse training needs and provide on-the-job supervision. Robertson and Stuart (1996) conclude that the training system must modify how it operates if it is to better meet the needs of small business. This observation about the need for the training system to be more market driven has also been put forward by the ESFC (1990), BIE (1991a), Coopers and Lybrand (1994), Worsnop (1994), the Karpin report (1995) and Cullen (1995).

Understanding the diverse nature and scale of small business

The Beddall report (1990) noted the lack of managerial skills of owner/managers in small business and suggested this was a major factor in inhibiting its success. Success was taken to refer to a small business' capacity to grow, expand and take on additional employees.

Indeed, the recent push to entice small business into vocational education and training is built on the premise that future job growth will come from this sector. What needs to be examined, however, is how many small businesses expand. Should we be finding out what type of small business owner aims to grow and take on an employee and then promoting and marketing the advantages of training to such owners? There will always be a percentage of small businesses with no plans for expansion and who are content with the way their business operates (Still 1994). These businesses, too, are successful in that they meet their owner's needs.

One suggestion of how to better meet the needs of small business clients is to tailor programs according to their stage of development.

The six stages referred to by Coopers and Lybrand (in the Karpin report) are:

- business intenders who may start a business but who are not actively pursuing a goal
- business intenders who have business ideas, some ability, motivation and resources
- micro-businesses with less than five employees
- business survivors—less than three years old and operating at near or break-even
- first-stage growth businesses—manufacturing businesses employing 5–50 employees or service/construction firms employing 5–10 employees which are still under direct control of the owner, have limited product range and are growing
- second-stage growth businesses which have more formal extensive management structures and are entering new markets and developing new products

This report makes the observation that much small business training is completed as a reaction to declining business performance, whereas the researchers believe that small business should have a positive desire for continuous improvement.

Field (1997) also makes reference to the importance of which stage of development a small business is at and he makes the point that 'some of the central learning issues for small business relate to survival, adaptation and growth after a period of time' (p. 6).

A competency standards body for small business management was established in 1992. Standards were published in 1993 and then reviewed and republished in 1995. The competency standards are generic and cover functions and activities involved in successfully managing a small business and are designed to apply to businesses operating in any industry sector. The key areas they cover are evaluating a business opportunity, completing a business plan, addressing legal and administrative requirements, addressing customer requirements, managing business operations, managing self and staff, managing finances and reviewing business. The application guide for the competency standards (Small Business

Management Competency Standards Body 1995) makes a point of noting that small businesses vary widely in their scope of operations; for example:

- their market focus can be local or export oriented
- their finance requirements can be limited and basic or extensive and sophisticated
- documentation requirements can be minimal or extensive and rigorous
- employment in a small business can refer to self-employment or employment of a number of staff up to 20
- functions in a small business can be performed entirely by the owner/manager or shared amongst a number of staff
- technological requirements can be simple or complex

Small business, then, is a challenge for the training community because it encompasses such broad parameters. While there are clear definitions of small business, the range of operations and scope of activity mean there cannot be one profile or template that fits all.

In 1990, the ESFC put forward its view on what should underpin small business training policy development. The conclusions reached in the ESFC report have been repeated, in part, in subsequent reports such as Coopers and Lybrand 1994, the Karpin report 1995, Cullen 1995, Baker and Wooden 1995, and Better Business Centre 1996. The approach to training described by the ESFC is as relevant today as it was in 1990 and many of the conclusions have yet to be dealt with:

- The need for TAFE and higher education to focus on small business training, not just enterprise skills.
- The need for the training system to offer a broader and more accessible range of courses that focus on survival and growth of the business and meet the needs of small business in terms of content and presentation style.
- The fact that training in small business has been aimed at managers and owners and not at small business employees:

  workers in small business need to progress beyond a grasp of the technical skills required by the firm to a broader understanding of the commercial,

> *marketing and customer service function which, in larger enterprises, would typically be handled by specialised departments of the firm.*
>
> (ESFC 1990, p. 75)

- The fact that much of the skill formation in small business is provided informally and occurs within the workplace and this needs to be recognised. This, in turn, means that there is a greater need for flexibility in methods of assessing and recognising vocational training and learning.
- The fact that small businesses are customers and suppliers to each other as well as to large enterprises. This interdependence has potential for skills development for small business. There is a need to:

  > *highlight the importance of seeing industry development and skill formation and training for small business within a common framework and of taking a broader view than has hitherto been the case of the provision of what has conventionally been referred to as small business training.*
  >
  > (ESFC 1990, p. 76)

- It should be a goal of future policy to strengthen existing business development networks used by small business and to extend the range of intermediary bodies to act as training brokers who can assist this sector in meeting its training needs. Again to quote:

  > *networks of businesses will need to work with training providers to develop programs suitable for the needs of that particular sector, in that particular geographic region.* (ESFC 1990, p. 77)

Further research related to the training needs of small business includes studies which identify and list the training needs of artists (Sylow 1992), of ethnic small business (University of Technology 1996), of remote and rural communities and of specific industries like printing tradespeople (Shetewi 1993) and transport (Mychaljlyk 1993; Wilson 1994). Specific projects such as these as well as the work that has gone into the development of national industry competency standards would suggest that there is sufficient information about the skills and knowledge needed by specific sectors of industry. The challenge remaining is how to make training relevant, accessible, sufficiently focussed and seen as necessary and desirable by small business.

Case study research into small business training has been undertaken to document training approaches adopted by specific enterprises in specific industries. This type of research provides a counter balance to all those reports that concentrate on describing what approaches to training should be taking place. Noble (1994) conducted a survey of firms in the Albury Wodonga region to identify how small firms identified training needs, how they planned training programs, who participated and how delivery was monitored. Noble noted that small firms emphasised on-the-job delivery that produced immediate benefits. Curtain (1995) concentrates on small leading-edge enterprises and describes the workforce profile, technology used, skill formation policies, training arrangements, links between skill formation and research and development, and attitudes towards youth as employees. Across all 12 case studies in the Curtain study, the most common method of learning new skills was informal on-the-job learning and task rotation supplemented, in some cases, with external training.

Field (1997) also undertook case study research and found that the small business in his case study group valued highly the learning they gained from suppliers, business partners, customers, other members of industry associations and sub-contractors.

Training needs of employees

According to the BIE (1991b), training of employees in small business is low due to the under-development of managerial skills of small business owners/managers. Coopers and Lybrand (1994) conducted research into small business training practices and preferences and found the employers were more interested in employees' attitudes, rather than their skills and knowledge. In addition, they relied on skills in the market rather than external training as a way of gaining new skills.

An investigation of the training needs of employees in small business overlaps with the issue of barriers to training. Coopers and Lybrand (in the Karpin report 1995) noted that while much research has been devoted to training needs from the perspective of the owner/manager, there has been little on the needs of employees. Callus (1994) also expresses a concern that the two million or so non-managerial employees are being forgotten in the training and education reforms and initiatives that are being developed. Callus states that there is no evidence to demonstrate employees have been effectively trained for their varied tasks and that employees may well have a range of skills not being fully utilised.

Employees in small businesses are often family members, who tend to be employed on a part-time and casual basis and have lower levels of formal education. Gallagher (1991) argues that the low levels of formal structured training in small business are due to the types of employees hired by small firms (the large number of women, part-time, casual workers and young workers) and the fact that turnover of employees tends to be high.

Robertson and Stuart (1996) found that small business managers are the major decision-makers in how much training is provided for their employees. They do not have the time to analyse training needs and manage the business while their employees undertake training and find it difficult to provide on-the-job supervision to these employees. This observation was also noted by Baker and Wooden (1995), who stated that 'small business managers have a weak training capability'.

The BIE (1991a) suggests that although employees in small firms were not undertaking much formal training, perhaps there was a large amount of informal training taking place. This could involve asking questions of co-workers, watching others work and being shown how to do the job. While studies like Curtain (1995) and Noble (1994) show that small business says its main method of skills formation is informal learning on the job, there is no information on the extent of informal training taking place.

The BIE states:

> *the substantial pools of employees in small businesses who receive little or no formal training provide a strong reason for giving the resolution of this issue high priority in the 1990s.* (BIE 1991a, p. 125)

As we approach the end of the decade, the existing body of research does not report on whether this issue is being resolved. However, as noted earlier, there have been many practical steps taken by government to encourage small business to take on trainees and encourage existing workers to undertake traineeships. The evaluation of these programs may provide the answer.

Further research

A number of researchers have put forward ideas for further research into the approach to training that best suits small business:

- research into skill needs in very small firms (employing less than five employees): ESFC 1994a, issues paper quoted in Roffey et al. (1996)
- whether the effectiveness of different types of training varies according to firm size: Baker and Wooden (1995)
- training needs of established businesses with growth potential: Coopers and Lybrand in the Karpin report (1995)
- research to highlight the important training issues associated with the various growth phases of a small business: Still (1994)
- the approach taken to training decision-making in small to medium enterprises: Baker and Wooden (1995)
- how training practices and structures differ and which factors were most important in influencing the provision of training in small to medium enterprises: Baker and Wooden (1995)
- how small business owners identify training needs: Coopers and Lybrand in the Karpin report (1995)
- what alternative processes are used in place of formal training: Coopers and Lybrand in the Karpin report (1995)
- the nature and effectiveness of informal and self-funded training in small business: Callus (1994)
- evaluation of small business understanding of current initiatives in training: Callus (1994)
- research into the learning that takes place within the organisation as it passes through different stages of development and during takeovers or changes in management: Field (1997)

- research into the influence of enterprise context on learning: whether and why knowledge and skill are valued, how they are utilised in the business and how learning is transferred between individuals and systems within and external to the firm: Field (1997)

Other gaps in research that should be investigated include:

- The training needs of employees in small business, including part-time, casual, contract.
- The evaluation of training conducted in small business in terms of benefit to the business and how it operates.
- Whether the VET sector has responded to research that indicates small business is not looking for external training, but to establish a relationship with training providers who can offer a package of services that includes short, focussed, mentored learning experiences as well as advice and counselling.
- Whether the training system can play a role in meeting the small business preference for training that is not accredited.
- What is a suitable training infrastructure for small business.
- What has been the response to the competency standards—have they penetrated the market and are they being used widely? (The other set of cross industry standards, those for workplace assessors and trainers, have been widely promoted.)
- What has the response been to the small business training programs that have been developed?
- What is the contribution of informal on-the-job learning?

There have been many developments in terms of small business training programs and management training programs, recognition of prior learning (RPL) procedures, workplace-based delivery and Nettforce traineeships. However, there appears to be little research into how much of this has actually lead to more training taking place in small business, or into the benefit of the skills and knowledge gained.

Research into delivery modes suitable for small business

The ANTA Small Business Training Policy Framework states:

> *Small business will be able to select a delivery method that caters for the learning needs of people in small business, such as small group discussions, workshops and personnel counselling, independent self-directed learning, experiential and action learning—which incorporates informal learning and self delivery.*
>
> *Learning strategies employed in the provision of training for small business will cater for the diversity of preferred learning styles. Processes used by training providers, including small business operators themselves, will be congruent with the learning preferences of small business participants. The strategies will focus on providing training that is:*
>
> - *learner centred and directed*
> - *short, sharp, specific rather than general and theoretical*
> - *built around use of team and group learning and problem solving related to practical issues in the workplace*
> - *short, medium and long term as required by small business*
>
> *The effectiveness of small business training is to be measured by the assessment of outcomes.* (ANTA 1996, pp. 7–8)

Need for providers to change how they operate

In 1991, Ernst and Young advocated that training programs be 'short, sharp and focussed'. In fact, almost all the reports mentioned in this review make some reference to the preferred content, mode of delivery, timing and duration, venue and location of training.

There is much research on delivery modes and flexible delivery and it is beyond the scope of this chapter to report on these. However, small businesses account for 97 per cent of all private sector businesses. Because of this, training providers and those who develop learning resources and professional development materials for workplace trainers should take account of the needs and preferences of small business. This is particularly important when models of delivery and flexible strategies for delivering and assessing training are being developed.

Cullen (1995) suggests that the system should:

> *abandon the restrictive practices of public providers—for example minimum class sizes, minimum student-teacher ratios, times and places of delivery course structure, delivery modes.* (Cullen 1995, p. 25)

The Better Business Centre (1996) and Robertson and Stuart (1996) also make the point that the training system has to change and provide a different range of services to small business. These reports echo the views of the BIE (1991a, 1991b) research. Despite the rhetoric about flexibility, such research indicates that the needs of small business are not being met in terms of approach'or delivery. Perhaps they cannot be met within the current funding and administrative structures.

Coopers and Lybrand (in the Karpin report 1995) observe that small business has a preference for training in small groups 'with instructors who have an applied knowledge of the subject matter and a flexible attitude' (p. 320) and that this preference is well-documented. Furthermore, small business wants action-based training which allows the trainer to have an advisory relationship with participants. Small business also wants ongoing counselling or support.

In its report on women in small business, the ESFC (1994b) notes that women employees in small business are traditionally employed less than full time and have limited access to training. Therefore, options for this group should include: distance learning, with on-job practice of skills; combinations of on- and off-the-job training supplemented by telephone training and advisory support; and open learning including videos, cassettes and local short seminars promoted through networks of small business and women's groups. Still (1994) observes that one of the dilemmas that is yet to be resolved relates to delivery—how to provide training in an appropriate form given that the majority of the sector is self-employed, isolated, works long hours and cannot afford time away from the business.

Research into the training needs of home-based, self-employed and small business people (Outer Eastern College of TAFE 1993) resulted in a model of delivery being developed which used a combination of videos, issues-based workshops and telephone links with mentors and peer group.

Field (1997) makes the point that: 'the generally ad hoc, on-the-job, flexible approach to supporting learning found in small business may actually be its strength rather than weakness' (p. 11).

Field believes that the word 'delivery' is interpreted narrowly in the training world. He points out that at the level of the individual employee, the range of learning activities includes:

- discussion with product representatives
- supplier-run seminars
- working on other job areas
- doing innovative projects
- helping other staff learn to use computers
- participating in review meetings
- one-to-one coaching
- asking questions
- experimenting
- watching someone more experienced

Field also states that the VET sector sees a change in approaches to delivery as the way to make training more attractive to small business and therefore to increase the demand for training. He feels that future research should be undertaken to challenge this view. He offers a number of reasons for his views—including his belief that there is under-recognition of the amount of learning that occurs in small business.

Workplace-based training

Workplace-based training or on-the-job training has been defined as 'the formation of skills, knowledge and attitudes which occurred in the trainee's normal workplace' (Clarke 1991, quoted in Robertson

1996). Billet (1993) defines workplace learning as the acquisition of knowledge and skills. Individuals participate in authentic vocational tasks, supported and guided directly or indirectly by more experienced workers. These workers demonstrate, coach, support the learner in the workplace and thereby gradually encourage autonomy.

Robertson (1996) pointed out that this kind of training could occur on a continuum from highly structured to informal programs with or without the support of a trainer, training materials or training technology.

Robertson (1996) identified and recorded employer perceptions of the effectiveness of workplace-based training in small business enterprises in which significant and structured workplace-based training was occurring.

For this study, small business was considered as a business employing no more than 10 staff.

Robertson's findings repeated those of Baker and Wooden (1995), namely:

- small businesses were more likely to have employees who possessed the required skills than those who required training
- small businesses therefore provide less formal training
- informal training was the predominant method of training in these enterprises
- small businesses preferred external to in-house training
- there are no workplace-based training courses in enterprises with less than 11 employees
- less than 5 per cent of training was workplace based in enterprises of 11–20 employees

Robertson found that there were few programs in small business which were structured to include documented workplace supervisor roles or structured and documented workplace training and or assessment. Robertson had difficulty finding workplace-based training programs in small business enterprises of no more than 10 employees where the training occurred as a joint venture between TAFE and industry; where industry-based training made up at least 20 per cent of the overall program; and where industry-based training was both structured and integral to the program. Ultimately, he found three such programs.

Employers associated with these three programs identified the following factors as contributing to success:

- programs specifically designed so they can be assimilated into the particular industry
- students need adequate time off the job to complete their study
- college tutors need to be clearly identified
- contacts and procedures to be followed when there are difficulties in workplace-based training programs should be clearly documented
- course content relevant to the industry
- training needs to provide authentic activities
- trainees to monitor own progress
- assessment requirements clearly documented
- preparing all staff for the arrival of the trainee
- trainees to be oriented to expectations of workplace-based training
- supervisors to receive some reward for participation—this may be in time release rather than payment
- supervisors need to be clearly identified as a point of contact for trainees
- supervisors need adequate time and relevant skills to train and assess
- workplace supervisor training needs to orient supervisors to their role
- workplace supervisor training needs to be short, effective and efficient

In his study on the tourism and hospitality sectors, Stevenson (1996) observes that the workplace plays an essential role in expressing key competencies and making them meaningful. He also shows that learning in the workplace is more clearly defined, more collaborative and more innovative than formal classroom training, yet provides less support and less independence to learners. Stevenson states that there are ethical questions to be considered when embedding learning in the workplace.

The implication of these observations is that providers need to understand fully what sort of learning environment there is at work when designing learning packages for use in this environment.

Catts (1996) undertook a research project to seek evidence of the value to small and medium-sized enterprise owners of investing in staff training. He also sought to identify and describe conditions under which a return on investment could be demonstrated. Catts used case studies of four small retail businesses within provincial cities in Queensland and concentrated on customer service training.

Across the four case studies, he found that success of structured skills training in small business depended on the commitment of the principal players and provision of ongoing support rather than quality of actual training provided.

This finding has important implications for how training programs and pilot studies are evaluated. Too often, the evaluation concentrates on the quality of the training rather than looking at the conditions within the enterprise that will ensure the training has a longer-term benefit.

Catts also found that small firms need separate attention to be successfully inducted into structured training. These firms rarely have an established training culture and their managers and owners do not generally have the skills or knowledge to manage and drive training. Thus, there is a need for facilitators to establish a training culture, conduct a needs analysis, monitor training delivery and evaluate the effects of training. In this case, it was provided by group training companies or the development officer at the Chamber of Commerce.

A broader role for the provider is gradually being acknowledged in recent small business reports and resources. The Better Business Centre (1996) developed strategies to enable providers to better meet the needs of small business based on their research and identification of best practice examples. Sweet (1996) has developed a framework for providers, giving them strategies to use when assisting small business to develop structured in-house training programs. Sweet states that it is now the business of TAFE staff to assist small business to research and develop enterprise-specific training programs aligned with the Australian Qualifications Framework and delivered in the workplace.

Further research

The dominant theme of all these investigations is that it is clear what type of delivery small business wants but the training system has not found a way to deliver this consistently. Before the training system can meet the needs of this market, it needs more information about small business and how skills are gained informally. This has lead to researchers suggesting the following areas of research:

- the workplace as a learning environment: Stevenson (1996)
- interaction between training, technology and firm size: Baker and Wooden (1995)
- what new learning and information transfer methods would suit small business: Coopers and Lybrand in the Karpin report (1995)
- how people learn in the workplace: Sweet (1994), Linke (1994)
- whether small business evaluates the effects of training—training may be having a greater result than employers believe: Callus (1994)
- in-depth study of training and learning in small business where learning is self-directed, experimental and action oriented: Field (1997)

Other questions raised by the research into small business and delivery of training

- Have innovative delivery and assessment approaches been used to make these programs attractive to the target groups?
- What are the assessment practices of small business?
- What is being done to help and encourage employers and supervisors in small business who take on trainees to provide training on the job?
- In what way are small businesses benefitting from the skills and knowledge gained by those who undertook the training programs?

- Do short, sharp training programs offered for small businesses result in them coming back for more training and, ultimately, for accredited training?
- How can current funding and administrative structures be changed so as better to meet the delivery approaches and modes preferred by small business?

Information and networks

With regard to information and networks, the ANTA Small Business Training Policy Framework states:

> *Small business needs to be able to readily access information which is clear, concise and targetted to their needs. This information should be accessible, timely and relevant.*
>
> *Networks need to be developed and extended to foster and encourage:*
>
> - *mutual support and information sharing, which links training matters with broader small business issues, utilising existing small business associations as appropriate*
> - *maximising the value of existing resources through networks of providers, including TAFE/Group Training Australia/Skill Centres/ Small Business Centres/private providers and of organisations such as ITABs and Industry Training Companies*
> - *promoting the benefits and value of training and the linking of delivery of training to industry requirements* (ANTA 1996, p. 6)

Information

The National Forum on Small Business Training Issues identified industry training advisory bodies (ITABs) as playing a key role in disseminating information to small business. ITABs need to market their services to small businesses in their industry and to gather information from them directly about their training needs. The forum acknowledged that selecting the appropriate way to communicate information about VET to small business was important. It also stated that small business operators respond best to the personal approach and that one-stop-shops for information such as council or chambers of commerce would be useful for regional and rural business operators.

The Beddall report (1990) makes a recommendation that those who provide financial advice to small business such as accountants and bank managers should increase their awareness of available training courses and opportunities and thus improve their capacity to give advice on the linking of business and skill development. This observation about the importance of advisors, such as accountants, was also made by the BIE (1991a, 1991b), ESFC (1994a, 1994b), Coopers and Lybrand (in the Karpin report 1995), the ABS (1996a), Roffey et al. (1996), and McInnes and Stanger (1996).

The literature is unclear as to whether financial advisors have acted on these observations. However, a recent project was commissioned by the Certified Practising Accountants (CPA) to identify the additional competencies needed by accountants to give advice and support to small business.

Furthermore, the ESFC (1994a) states that the professional service provided by advisors such as accountants has a potentially valuable role to play in assisting small businesses to focus on business performance. In addition, it can provide an avenue for advice and training. Still (1994) found that women favour coaches or advisors who visit the business and assist them with day-to-day operational and longer-strategic needs. These observations about the importance of linking training to performance and strategic planning, business advisors and mentoring have led to some projects being funded to pilot such approaches (Outer Eastern Business Network as reported by the Karpin report 1995 and the State and Regional Development NSW 1996 Business Mentor Program which continued in 1997 under licence through the Australian Institute of Management).

Networks

Networks are described by the Karpin report (1995) as providing a 'process of information exchange, communication, workshops and business development programs'. As a result of research into networks, Coopers and Lybrand noted the growing interest in the usefulness of networks as a tool within small business. They act as an effective surrogate to formal training processes which are not widely regarded by small firm owners/managers' (p. 919). The ESFC (1994a, 1994b), Roffey et al. (1996) and McInnes and Stanger (1996) draw attention to the value of networks and the role they play in development and acquisition of skills by small business and women in small business in particular. The role of mentoring and networks is acknowledged and highlighted in numerous research reports. However, there has been little published, beyond the pilot reports mentioned earlier, on actual practice and how the VET training system can build on or integrate networking and mentoring into the training service it offers to small business.

Further research

With regard to research gaps in the area of information, Callus (1994) suggests the following as priorities:

- how employers make the training decision and who gets training
- investigation of whether skilled workers are under-utilised in small business
- employers' awareness of available training programs and government programs

Information like this could help training providers market the package of services they have to offer small business and could help them promote the benefits of training.

Baker and Wooden (1995) suggest further research into whether the poor attitude of small business managers underlies their relatively low level of formal training provision.

Field suggests that:

> *research into training and learning within the small business sector needs to look not only at learning within the firm and co-operative arrangements between the VET sector and the firm but also learning between firms and their operating environments (which include customers, suppliers, business partners and allies, other members of industry associations and subcontractors).* (Field 1997, p. 16)

Other gaps in research relate to the role and consultation practices of ITABs:

- Are ITABs reaching and disseminating information to small business and encouraging them to take part in training?
- How best can ITABs consult with and support small business?

With regard to research gaps in the area of networking, Coopers and Lybrand (in the Karpin report 1995) question the impact and potential of networks, support groups, action-learning techniques and use of private sector agents such as banks and accountants in small business training.

Other gaps resulting from a review of the literature include:

- Whether networks do play a role in VET practices in small firms.
- Whether accountants and other business advisors are expanding their advisor role to include advice on skill development and training options.
- How much accountants and other business advisors know about the training system and training options which are available to small business.
- How much actual mentoring goes on in small business and how much advice is sought from business advisors.

Credibility and quality of training

The wording of the ANTA Small Business Training Policy Framework with regard to credibility and quality of training is:

> *Credibility of training for small business clients will be enhanced by ensuring the currency and competency of trainers, both public and private.*

Small business training will comply with appropriate quality assurance systems. (ANTA 1996, p. 8)

This issue refers to whether trainers involved in small business training have enough relevant experience to be credible to small business operators. Quality, as it is used here, refers to the fact that training should be relevant, flexible and aim at the pursuit of excellence.

Professional development for training providers

Since the development of the Australian Vocational Training System (AVTS), the Commonwealth has directed funds nationally for professional development of training providers and enterprise trainers to prepare them for the implementation of the AVTS.

The adoption of a competency-based approach to training and the focus on industry needs means that training providers have had to incorporate work-based learning into the collection of methods, approaches and tools they use to deliver training effectively to target groups. In 1992, the TAFE National Staff Development Committee commissioned research involving case studies and documenting the implications of work-based learning. Subsequently, the National Staff Development Committee of the Australian National Training Authority published a discussion paper in 1995 putting forward a work-based learning model for national staff development.

Recent professional development funding under the Australian Vocational Training System Professional Development (best practice) program has been directed specifically at small business and is to develop small business best practice professional development models. The program started in 1995 with an allocation of $500 000 and this was increased to 1.85 million in 1996–97. So far one report has been published (DEVET 1996a). However, there is considerable research activity taking place, with further publications expected.

The Department of Vocational Education and Training (DEVET) in Tasmania (1996b) focussed on the development of workplace assessor networks for small enterprises in furnishing, automotive and hospitality industries. This project has had a number of outcomes. It has created a workplace assessor network in target industries, facilitated partnerships between training providers and small business and encouraged training providers to use good practice principles when providing workplace assessor courses.

If this project is representative of other professional development projects, it would appear that funding is being used to provide free training programs to trainers in industries which have structured programs running.

Questions that arise from this approach include:

- If funding is not available, who will pay for assessors/trainers to be trained?
- Is the training system using the skills of these assessors/trainers?
- Are these assessors using their skills for informal training and thereby improving the traditional type of on-job training that has always occurred?
- Are more small businesses being attracted to put their people through accredited training now?
- Given the few small businesses that admit to spending money on training (18 per cent according to the latest ABS figures), where are all these assessors and trainers using their skills—are they using them for informal training?

Mentoring

The ESFC (1994a) report focusses on the skills, attributes and conditions needed for small business to grow and flourish. With regard to skill development, the report notes that there is a diverse range of advisory, networking, training and educational services available to small businesses and that much of this service provision is a training function or advice related to a training function. The authors of the report note that there is a need to focus on linkages between performance, strategic planning, business advice and training. This observation is further strengthened by reference to the observation that mentoring arrangements:

> *whereby experienced business people provide advice to those starting a small business or to owner/managers of existing businesses who are experiencing difficulties are widely regarded as a fast and effective way to assist small business operators to quickly build up their business and management skills.* (ESFC 1994a, p. xvi)

More recently, Catts (1996) reports that workplace training must utilise mentoring and support the one-to-one practice of skills in workplace settings. Mentors play an integral role in maintaining the efficiency, and therefore the credibility, of workplace training.

Given that small business has stated its need for training that is delivered one-on-one, research focussing on mentoring is starting to emerge. Chapman (1996) undertook an ANTA-funded project to investigate whether the mentoring mode of flexible delivery and learning was an appropriate, effective and efficient form for workers at ASF levels 1-3. The Engineering Production Certificate–Flexible Delivery project was designed for learners to work through an off-the-job training program away from a TAFE campus and with the assistance of the workplace. TAFE personnel assisted people in the workplace and acted as their mentors. As a result of this project, it was recommended that the model of mentored learning be considered by training providers and enterprises for learners at ASF levels 1–3, particularly for modules with a high practical component. It was further recommended that a professional development and training package be developed for staff of training providers who plan to use this model of delivery.

Another project which piloted mentoring arrangements between women who own and run small businesses (State and Regional Development NSW 1996) was highly successful in achieving targets such as increasing turnover, employment of staff, and growth of the business.

Training providers who seek to meet the vocational education and training needs of small business can learn from other providers who share their experiences and observations as a result of providing training to small business. For this reason, case study reports are valuable since they document approaches taken, successful aspects and areas for improvement.

The Better Business Centre (1996) undertook an ANTA-funded research project to identify examples of best practice training to small business. In this study, training provision was rated according to three criteria: how it matched the content and delivery of skills development programs with the needs of small business operators; how the program was marketed and promoted to the target group; and how the program stimulated demand for skills development in small enterprises. In the seven case studies undertaken, the researchers noted that 'in many quarters both providers and users do not value accredited, assessable programs' (p. ii). They ask: how are training providers to cater for those small business clients who are content accessing training that falls outside the scope of accreditation and how is small business to be encouraged to convert to competency-based, modular training?

The researchers found the following elements to be good practice and successful:

- providing short modules repeated at frequent intervals
- including introductory seminars and non-accredited programs in building a desire for further training
- having credible presenters
- responding immediately if program is to be relevant
- providing technical and managerial training concurrently
- arranging for mentoring and follow-up to ensure skill transfer
- establishing cohesive groups and self-support structures for clients
- understanding the target group and catering to their unique requirements

Further research

Coopers and Lybrand (in the Karpin report 1995) note that there is limited public information on the effectiveness of small business training programs or on the frequency, form and outcomes of any course evaluations. Research seems to concentrate on training needs and preferred forms of training, rather than quality and outcomes. The following research priorities have already been identified:

- an assessment of the effectiveness of different delivery methods for training employees in small business: Callus (1994)
- the effectiveness of workplace-based training: Sweet (1994), Linke (1994)
- factors which contribute to the successful implementation of such a policy direction: Sweet (1994), Linke (1994)
- does workplace-based training provide cost-effective and accessible training: Baker and Wooden (1995)
- identifying cost benefits and cost distribution for mentored mode of flexible delivery: Chapman (1996)

With regard to the matter of training and professional development of supervisors and skilled workers who train others in small business:

- How many supervisors in small business have done workplace trainer and/or assessor training?
- Are there alternative models for gaining workplace trainer and assessor skills that would better suit small business?
- What quality assurance systems are applicable to small business training?

Equity

The ANTA Small Business Training Policy Framework states:

> *Small business training requirements will address the needs and requirements of all Australians operating and working in small business, taking into account the special needs of a diverse and multi-cultural society.* (ANTA 1996, p. 8)

Gallagher (1991) states that more evidence needs to be collected on the composition of the small business workforce. He points out:

> *to the extent that it is disproportionately composed of disadvantaged workers, policy initiatives directed at increasing skills and productivity*

> *within small business may have an important role to play in achieving social justice objectives.* (Gallagher 1991, p. 7)

With regard to equity, the research conducted throughout the 1990s in small business and vocational education and training has concentrated on women in small business, and small business employment and skills in the rural sector. There has also been a major study commissioned on ethnic small business and one on small business and people with a disability. However, there does not appear to be a major study on the small business needs of Aboriginal and Torres Strait Islander people. Reports have been commissioned on the VET needs of people with a disability and the Aboriginal and Island population and therefore no review of this type of research is included in this chapter.

Women and small business training

The Employment and Skills Formation Council (ESFC 1994b) notes that the rate of small business ownership by women is growing at about twice the rate of men and evidence suggests that the survival rate of small businesses operated by women is higher than that for men. The ESFC report focusses on the needs of women, drawing attention to the lack of appropriate and suitable training for women in small business. It also highlights the importance of adequate, affordable child-care for women who set up businesses at home. This report distinguishes the training needs of two other groups of women: women employees in small business who are traditionally employed less than full time and have limited access to training; and women who have home-based businesses: these women can be isolated and family commitments make time management difficult. Most women in small business are employees and do not receive much in the way of formal training since small firms provide so little of it. After-hours training between 4 pm and 7 pm is not an option for many women since this is the time when family commitments are paramount. Research conducted by the Tasmanian Women's Consultative Council (1996) reveals that while some women did not feel they needed training, those that did stated they could not do it because courses were neither relevant nor accessible.

Still (1994) distinguishes a number of forms that small business ownership can take for women: self-employment, micro-business (employing up to five employees) and small enterprise (employing up to 20 employees). Still also identifies two factors which motivate women small business operators. The first is working in their own businesses for the principal purpose of furthering personal goals, which she terms 'satisficer'. The second motivating factor is working in their own businesses for the principal purpose of profit and growth, which Still terms 'entrepreneur' or 'expansionist'. Generally, the 'satisficers' do not want to grow and want to remain solo-operators. Still states that research needs to be undertaken to find out how to turn the satisficers into expansionists who will, in turn, employ others. Still shows that research into small business women tends to concentrate on the new entrant and does not consider in any depth the needs of the longer-term survivors.

Still states that most women small business operators are graduates and that a number of studies have established that women possess little confidence about their financial, marketing and sales skills. She also reveals that women want sound practical advice rather than theoretical courses, that they have families and can rarely afford the time away from business and family. In addition, women favour coaches or advisors who will visit the business and help them with day-to-day operational and longer-term strategic needs. Still notes that one of the dilemmas yet to be resolved is 'how to provide appropriate training in an appropriate form, given that the majority of this sector is self-employed, isolated and works long hours'.

The report mentions the need for support networks, development of computer-based resources, training that is supplemented by telephone and advisory support, using networks of small business and women's groups, and learning in pairs or small groups. Networks and mentoring are seen as effective and valuable sources of business and advice and training. This theme is repeated in the survey conducted by Roffey et al. (1996) and mentoring programs for women have been trialled (State and Regional Development 1996).

The Department of Industry, Science and Technology (Roffey et al. 1996) conducted a literature review to clarify the nature and extent of existing research on women in small business. This included a review of research on the use of training and business assistance programs. The review found that:

- the use of government services by women was generally low
- the use of independent sources of assistance by women was generally higher
- the most frequently used independent sources of advice were accountants and then lawyers, bank loan officers and tax specialists
- the most frequently used independent non-professional sources of assistance were family, friends and colleagues and not business associations
- the areas of business advice and training most often undertaken or needed by women were financial management, marketing, promotion and confidence building

The Outer Eastern College of TAFE (1993) also identified financial management, business planning, organisational and marketing skills and personal and interpersonal skills as training needs of women in home-based self-employment and small business. A similar range of training needs was identified by Wilson (1994) for women in the transport industry.

With regard to networks, Roffey et al. (1996) state that the business woman most likely to belong to a network would be Australian born with post-secondary education and a business in community services, manufacturing and finance or property and business services. In addition, she would be home based with no employees and would have owned a firm for under 10 years, with a turnover of less than $100 000. This review notes the findings of some research stating networks were 'sources of support, but not credibility' (p. 25) which brings attention to the fact that networks serve different purposes.

One piece of research that focussed on encouraging small business to consider accredited training is the work of Barrera and Robertson (1996), who identified gaps in skills and knowledge of small business women which may influence their decision to take on a trainee. As a result of this research, Barrera and Robertson designed and piloted a training course to address the skill and knowledge gaps.

VET and the rural sector

As part of its research on small business employment and skills the ESFC (1994c) published a special report on the rural industry. It states that the major priorities for skills development are the need to develop quality management and the need to emphasise the use of information technology both as a management tool and as a tool for learning. The council put forward specific recommendations with regard to information technology, including that it be an integral part of farm management courses. The council also recommends that the rural industry training boards be allocated funds so they can formulate a strategic plan to develop and diffuse interactive multimedia means for training people working in the rural industries.

The council makes it clear that middle management and technical training will be required by a greater proportion of the rural workforce and these will be achieved increasingly by qualifications. The agriculture and horticulture industries' State training profiles should reveal the extent to which the rural workforce is achieving qualifications. They should also show to what extent information technology is being used by management and in delivery of training. Given the apparently small amount of further research undertaken, it may be timely to evaluate the extent to which these recommendations have been achieved. It would also be useful to look at the uptake of formal training since the development of competency standards, traineeships, RPL procedures and other initiatives associated with training reform.

McInnes and Stanger (1996) undertook a pilot study on women in three rural regions of South Australia. The study concentrates on the contribution of women to businesses where they are in marriage or de-facto relationships with the co-owner and women's experience as independent operators. With regard to training, McInness and Stanger identify the extent of business-related training undertaken by owners, the areas of business management training and the preferred structure, duration and timing of such training.

The recommendations made in the report echo the earlier ESFC report, in that they stress the importance of management training and availability of management training modules. The report also recommends that the government encourage TAFE, universities and other providers to develop business management training modules or kits that allow flexible, home-based self-paced learning with the potential for workshops in regional centres. Finally it encourages increased co-ordination between providers of business management training.

One further project relevant to the rural industry is a Queensland Vocational Education and Training Research Institute (VETRI) project 'Delivery of VET to small to medium enterprises in regional and isolated communities'.

VET and non-English-speaking small business owners

TAFE NSW Multicultural Unit and University of Technology Sydney (1996) have collaborated on a research project 'Training for ethnic small business'. The project aimed to increase the understanding of VET issues in the small business sector and to generate policy recommendations designed to increase the participation rates of small business people from non-English-speaking backgrounds (NESB).

The authors constructed a national profile of small business operators in terms of ethnicity, industry, distribution, gender, current skill levels and gaps, experience of and attitude to training and current level of participation in VET.

This study found that:

- One half of all small business in Australia could be described as ethnic small business—owned and operated by first or second generation immigrants.
- Female-owned and operated small business is growing at a faster rate than other small business in Australia.
- Spouse and broader family play a more critical role in ethnic small business than in other small businesses.
- The proportion of workers in small business without a high school education is higher among NESB workers than among workers with an English-speaking background.
- More than one quarter of NESB workers in small business do not speak English well, according to their own assessment.
- NESB entrepreneurs are more likely to have post-secondary or tertiary qualifications than English-speaking-background workers, but less likely to have trade qualifications.
- English-language proficiency is a barrier to participation in VET training for some NESB small business operators.
- The low level of on- and off-the-job training for NESB workers in small business is similar to workers from English-speaking backgrounds. However, NESB workers are less likely to have participated in any off-the-job training and employers of NESB workers are less likely than employers of workers from English-speaking backgrounds to initiate off- the-job training for their staff.
- A significant proportion of NESB workers have training carried out in the workplace bilingually or in languages other than English.
- Ethnic small business has a very positive attitude about the importance of and need for VET: two-thirds to three-quarters of business owners from different ethnic groups agreed with the statement that 'training is critical to the success of small business'.
- The greatest areas of demand for VET for small business owners and managers are in areas of management education—including personal, financial and marketing management—computing, business culture, law and administration.
- Three major areas of training identified by NESB workers were computing, English language and communication skills and industry-specific technical skills.
- Ten per cent of NESB workers are without a high school education.

- Like English-speaking staff, major constraints include time to release staff for training and its cost.
- Other major constraints facing NESB workers in accessing training were employer's attitude, family obligations, English language proficiency and lack of information.
- Lack of critical mass of workers in individual small business suggests the need to offer workplace training in other than a traditional face-to-face model.
- NESB workers are more interested in having their training delivered off the job than workers from English-speaking backgrounds. TAFE is the favoured provider for off-the-job training.

VET and the needs of people with a disability in small business

ESFC (1994d) prepared a report on employment in small business for people with a disability and put forward recommendations aimed at enhancing and creating small business employment opportunities for people with a disability. The council makes the point that since small business is making an increasing contribution to overall employment growth, it is important that people with a disability share in that growth. The recommendations in this report centre around making changes to the funding and administrative arrangements in various government departments. This will ensure that people with a disability who are interested in self-employment or employment in small business are not disadvantaged and have the support and assistance they need to apply for a job. It is also recommended that pilot programs be undertaken to examine the feasibility of providing a national program to provide work-based personal assistance to people with a disability.

There does not appear to be any further research on the small business training requirements of people with a disability.

Areas for further equity research

With regard to the issue of how small business training is dealing with the issue of equity, some researchers have indicated further research is needed to:

- gather more data on training needs of ethnic minority women, rural women, non-professionally-educated business women, 'contributing' wives in family and non-family business (Roffey et al. 1996)
- investigate the need for training for women in business beyond the start-up phase of the business (Roffey et al, 1996)
- investigate the extent and form of training for part-time workers (Callus 1994)
- investigate the operation of home-based businesses in order to identify successful business and skilling strategies (ESFC 1994b)

There would also appear to be a need to investigate the needs of the self-employed and those in family employment and how to meet the need for training in small enterprises in regional areas. These areas tie in closely with research on delivery of training to small business.

There is little published research about the VET needs of people with a disability in small business and those of Aboriginal and Islander people in small businesses. This suggests that there is a gap, unless this has been covered adequately in more general reports on VET and the needs of these two groups of people.

Findings and directions for further research

The Bureau of Industry Economics (1991a, p. 83) states: 'at least since the Wiltshire Inquiry in 1971, there has been concern about the provision and low levels of uptake of small business management training in Australia'.

Later on in this same report:

> *despite a number of major reports in the 1980s which pointed the way for effective reform, inadequate small business management skills are still perceived as a problem in 1991.* (BIE 1991a, p. 124)

Twenty-seven years after the first inquiry and seven years after the BIE report, we are still concerned with the lack of management training and formal training for small business employees in Australia.

Since the early 1990s, research in small business and vocational education and training has led to recommendations regarding the need for more training, the need to target training, the need to make training accessible and the need for the training industry to be more market oriented. This point regarding the need for market orientation is the dominant theme that emerges through most of the research. However, it is unclear how many of these recommendations are ever acted upon: there is no follow-up to report on whether they were implemented. As a result, many reports repeat or confirm the findings of earlier studies. Many of the reports also draw attention to areas for further research.

The main research activities in small business and vocational education and training in the period 1990–97 focussed on recognising that small business had special needs, identifying these and identifying how to meet these needs. Research activity also focussed on small business management training, effective methods of delivery and presenter attributes that are desirable when training small business. Having established what needs to be done, research activity should be directed at evaluating the extent to which research recommendations have been implemented:

- Are these needs being met—do training programs for small business have the characteristics which the research is saying small business wants?
- What innovative delivery strategies are providers using and are these leading to an increased uptake of training?
- Is the VET system catering to all groups of people within small business (employees and self-employed as well as managers) in enterprises that are new, established and seeking out new markets?
- Are small businesses expanding, creating jobs and entering into exporting as hoped?

There are many potential areas of research but which ones will contribute significantly to the basic outcome desired by government—namely, that small business adopt a training culture, participate in accredited training, develop, expand and take on an employee? The fact remains, that despite the attention given to small business training issues, only 18 per cent of small business employers according to the ABS (1995) report some training expenditure.

There also appears to be a circular argument pursued in some of the research: is the problem the fact that small business does not have an established culture of training and therefore the benefits of training need to be promoted before there will be an uptake of training? Or is the problem related to the fact that training reform has focussed on large company needs and therefore must change the way it operates to meet those of small business? Such changes include looking at ways of mentoring, coaching, promoting non-accredited training and alternative ways to make training attractive to small business, and building on the learning that is taking place in that sector.

Field (1997) notes that very little structured learning occurs in small business. In most Australian VET research efforts, either training and learning are treated as synonymous or there is an implication that for learning to be legitimate it has to be structured and delivered.

As initiatives such as flexible delivery and user choice are further developed, the VET sector will find out how well the market can cater for the training needs of small business. An important focus of evaluation of such programs will be to find out how effective these are in terms of the actual skills and knowledge acquired, the use of the newly acquired skills and knowledge and the return on investment obtained from training. With this information, the training system will be better equipped to promote the benefit of training and produce a training product/service that meets the needs of small business.

References

ABS (Australian Bureau of Statistics) 1995, *Small business in Australia (Catalogue No. 1321.0)*, AGPS, Canberra.

—— —— 1996a, *Characteristics of small business in Australia 1995 (Catalogue No. 8127.0)*, AGPS, Canberra.

—— —— 1996b, *Persons employed at home, Australia September 1995 (Catalogue No. 6275.0)*, AGPS, Canberra.

ANTA (Australian National Training Authority) 1996, *National forum on small business training issues*, Australian National Training Authority, Brisbane.

Baker, M & Wooden, M (eds) 1995, *Small and medium-sized enterprises and vocational education and training*, NCVER, Adelaide.

Barrera, S & Robertson, R 1996, *A recipe for success: Small business growth through training opportunities for women*, Department of Employment, Education, Training and Youth Affairs.

Beddall report 1990: see House of Representatives Standing Committee on Industry, Science and Technology.

Better Business Centre 1996, *Strategies to include skills acquisition and skills development within small business*, Australian National Training Authority, Brisbane.

BIE (Bureau of Industry Economics) 1991a, *Small business review*, AGPS, Canberra.

—— —— 1991b, *Small business training*, Departments of Employment, Education and Training and Industry, Technology and Commerce, Canberra.

Billett, S 1993, *Learning is working when working is learning*, Centre for Skill Formation Research and Development, Griffith University.

Callus, R 1994, 'Research priorities for small business', in *Research priorities in vocational education and training*, NCVER on behalf of ANTARAC.

Catts, R 1996, *Validating training benefits in the workplace*, Centre for Further Education and Training, University of Southern Queensland.

Chapman, K 1996, *Mentored learning at ASF Levels 1–3*, Australian National Training Authority and TAFE Manufacturing Training Division, NSW.

Commonwealth of Australia 1991, *Australian mission on management skills*, vol. 1: report, Commonwealth of Australia, Canberra.

Coopers & Lybrand 1994, *Small business training practices and preferences: A report for VET providers*, TAFE NSW, Sydney.

—— —— in Industry Taskforce on Leadership and Management Skills 1995, *Enterprising nation*, Industry Task Force on Leadership and Management Skills, Canberra.

Cullen, R 1995, *An analysis of qualification profiles in Australian industry wholesale & retail trade*, Australian National Training Authority, Brisbane.

Curtain, R 1995, *Skill formation in small leading edge enterprises*, Dusseldorp Skills Forum, Sydney.

DEVET (Department of Vocational Education and Training) 1996a, *AVTS professional development program Tasmania: 1995–96 final report*, DEVET, Hobart.

—— ——1996b, *Small business assessor network Tasmania*, Department of Vocational Education and Training, Hobart.

DIST (Department of Industry, Science and Technology) 1995, *Annual review of small business*, DIST, Canberra.

Ernst & Young 1991, *Business skills formation needs analysis: A study of the training needs of small businesses in a recession*, final report to the Small Business Development Corporation of Victoria, Canberra.

ESFC (Employment and Skills Formation Council) 1990, *Advices of the Employment and Skills Formation Council July 1988–June 1990*, National Board of Employment, Education and Training, Canberra.

—— —— 1994a, *The shape of things to come: Small business employment and skills*, National Board of Employment, Education and Training, Canberra.

—— —— 1994b, *Making it work: Women in small business*, National Board of Employment, Education and Training, Canberra.

—— —— 1994c, *Cultivating the human factor: Employment and skills in Australia's rural industries*, National Board of Employment, Education and Training, Canberra.

—— —— 1994d, *More than able: People with disabilities and small business*, National Board of Employment, Education and Training, Canberra.

Field, L 1997, *Training and learning in small business: Issues for research*, Research Centre for Vocational Education and Training, UTS.

Gallagher, M 1991, *Building a small business training strategy—further research challenges (Working paper no. 71)*, Bureau of Industry Economics, Department of Industry, Technology and Commerce.

House of Representatives Standing Committee on Industry, Science and Technology 1990, *Small business in Australia: Challenges, problems and opportunities* (Beddall report), AGPS, Canberra.

Industry Taskforce on Leadership and Management Skills 1995, *Enterprising nation* (Karpin report), AGPS, Canberra.

Karpin report 1995: see Industry Taskforce on Leadership and Management Skills.

Linke, R 1994, *What are research priorities of VET?*, workshop paper for the Victorian Training Research Conference, Holmesglen College of TAFE.

McInnes, E & Stanger, T 1996, *Women in small business in targetted rural regions of South Australia*, South Australian Women's Advisory Council, Adelaide.

Mychajlyk, J 1993, *Small business management training in the transport industry*, Transport and Storage Industry Training Board, Victoria.

National Staff Development Committee of ANTA 1995, *Work based learning: A model for national staff development*, National Staff Development Committee, ANTA.

Noble, C 1994, 'The management of industry training programs: A regional study', in *Australian and New Zealand Journal of Vocational Education Research*, vol. 2. no. 2, pp. 88–101.

Outer Eastern College of TAFE 1993, *Training for success in home-based self-employment and small business*, Outer Eastern College of TAFE.

Robertson, I 1996, *Workplace-based training in small business enterprises*, State Training Board, Victoria.

Robertson, R & Stuart, J 1996, *Analysing trends in small business training*, Western Australian Department of Training.

Roffey, B et al. 1996, *Women in small business: A review of research*, Department of Industry, Science and Tourism, Canberra.

Shetewi, A 1993, *Retraining needs of pre-press tradespeople in Tasmania*, Tasmanian Printing Industry Training Board.

Small Business Deregulation Task Force 1996, *Time for business*, Commonwealth of Australia.

Small Business Management Competency Standards Body 1995, *Small business management competency standards application guide*, Small Business Management Competency Standards Body.

State and Regional Development NSW 1996, *Women in business mentor program*.

Stevenson, J (ed.) 1996, *Learning in the workplace: Tourism and hospitality*, Centre for Skill Formation Research & Development, Griffith University, Queensland.

Still, L 1994, 'Women in small business', in *Research priorities in vocational education and training*, NCVER on behalf of ANTARAC.

Sweet, J 1996, *Developing workplace learning programs within small business*, Western Australian Department of Training, Perth.

Sweet, R 1994, *Why isn't there more research on VET in Australia?*, workshop paper for the Victorian Training Research Conference, Holmesglen College of TAFE.

Sylow, K 1992, *Business training for artists final report*, Tasmanian Arts Industry Training Board.

Tasmanian Women's Consultative Council 1996, *Women in small business: A Tasmanian perspective*, Office for the Status of Women, Tasmania.

University of Technology Sydney 1996, *Training for ethnic small business*, ANTA, Brisbane.

Wilson, G 1994, *Small business management training for women in the transport industry*, Transport and Storage Industry Training Board, Victoria.

Worsnop, P 1994, 'What are industry's training requirements and how are they being determined?', in *Australian TAFE Teacher*, vol. 28, no. 4, pp. 23–29.

5 Training markets*

Damon Anderson

Context

The open training market

THE CONCEPT OF a training market first emerged in the context of the micro-economic reform strategy initiated by the federal government in the latter half of the 1980s. In essence, this strategy aimed to address Australia's balance of payments problems by enhancing the productivity and international competitiveness of Australian industry. One of the key elements of the strategy was the development of a highly skilled and adaptable workforce through a combination of labour market and training reform. The restructuring of industrial awards, together with strategies to improve the national skills base and forge closer links between skills supply and demand, were seen to be essential pre-conditions for addressing Australia's economic problems (ACTU/TDC 1987; Dawkins & Holding 1987; Dawkins 1988, 1989).

In response to a projected increase in demand for training from individuals and industry as a result of award restructuring and workplace reform, the Deveson report (1990) identified a need to improve the efficiency and effectiveness of the training system.

---

* This chapter is a reprint of Anderson, D 1997, *Competition and market reform in the Australian VET sector*, Review of research, National Centre for Vocational Education Research, Adelaide

The Deveson report suggested that, unlike industry and private providers, the public technical and further education (TAFE) system had become too insular and inflexible as a consequence of its longstanding reliance on government subsidisation. It echoed the views of government and industry that TAFE would require substantial renovation if it was to remain relevant and responsive to the rapidly changing skill requirements of individuals and industry.

In order to re-orient TAFE to the needs of industry and the workplace, the Deveson report advocated major changes to traditional funding, recognition and delivery arrangements in the training system. In particular, it recommended the development of a more open and diverse training market comprising high-quality providers in the public and private sectors.

> *An important trend, which award restructuring can be expected to accelerate, is the development of a more comprehensive set of markets for training. Increasingly the decision by individuals and organisations to undertake training will involve a choice between public, industry and private training providers.* (Deveson 1990, p. 9)

According to Deveson, TAFE would become more efficient and client-oriented if it was subject to greater competition for public vocational education and training (VET) funds. In a climate of public sector budgetary restraint, it proposed that TAFE should adopt a more entrepreneurial approach to income generation, particularly from industry. In Deveson's view, reforms to training supply would also have to be accompanied by an increase in the level of private investment in training by individuals and industry.

Following the Deveson report, the concept of an 'open training market' was endorsed by all Commonwealth, State and Territory VET ministers. In April 1992, the development of 'an efficient, effective, responsive and integrated training market' was incorporated in the *Common and agreed national goals for vocational education and training in Australia* (MOVEET 1992).

Competition policy

Another key element of the federal government's micro-economic reform strategy was the development of a national competition policy. Since the mid-1980s, the federal government had taken steps to improve the international competitiveness of the Australian economy through various initiatives such as financial deregulation and tariff reform. In 1992 as part of the ongoing process of reform, the federal government appointed an Independent Inquiry into National Competition Policy, chaired by Professor Fred Hilmer (Hilmer 1993). Its brief was to identify barriers to the development of an open and integrated national market. Hilmer focussed attention on removing impediments to market-based competition created by government regulation and government ownership. To this end, Hilmer recommended a set of national competition principles for reforming the operations of government business enterprises including:

- removal of regulations which restrict competition
- restructuring of public monopolies
- facilitation of 'third party' access to public facilities
- fostering of 'competitive neutrality' between government and private businesses

As Ryan states, 'the two main outcomes of the Hilmer inquiry were to promote a single integrated market throughout the Australian Federation and to introduce competitive disciplines into the public sector to certain areas like the regulated professions' (1995, p. 24). The recommendations of the Hilmer Report (1993) were subsequently endorsed by the Council of Australian Governments (COAG) in 1994 and collective agreement was reached in April 1995 to implement a National Competition Policy based on the Hilmer recommendations.

Although the extent to which the principles underpinning the National Competition Policy will apply to the VET sector remains unclear, it appears likely that the principle of competitive neutrality will have a significant impact on public VET providers

(Harmsworth 1996). Commonly referred to as a 'level-playing field', competitive neutrality is 'the situation where no provider, public or private, has a competitive advantage or disadvantage as a result of government policy regulations' (ANTA 1996, p. 37).

Australian National Training Authority

In 1992, the Australian National Training Authority (ANTA) was established to co-ordinate the development of a national training market. In support of its plan for market reform in the national VET sector, ANTA released *Towards a skilled Australia. A national strategy for vocational education and training* (ANTA 1994c). According to ANTA (1994c, Foreword), it aims to ensure that VET is:

- more flexible, to accommodate the needs of industry as the principal client
- more devolved, so that decisions are taken by those most closely attuned to the needs of clients
- more competitive, to encourage the quest for superior performance
- more informed, so that all parties are aware of the directions and detail of change

Enhancing choice and diversity for clients and increasing provider responsiveness to client needs through competition is identified as one of the four main national priorities. ANTA (1994c) identifies a number of strategies to promote greater responsiveness including: 'opening up the training market'; an expansion of competitive funding processes; the introduction of 'user-choice' arrangements for apprenticeship/traineeship training; removal of barriers to market entry for industry and private providers; improving access to training for small business and disadvantaged groups; and increasing industry involvement in resource allocation processes.

In late 1996, ANTA released *Developing the training market of the future. A consultation paper* (ANTA 1996) as a basis for establishing a national approach to training market development. The following rationale was offered for the development of a competitive training market:

> *In order to develop the skills which underpin the competitiveness of business, reform in vocational education and training must keep pace with reform in the industries it services. Otherwise, Australia will have difficulty in responding to competitive pressures. Indications are that vocational education and training at present does not fully address the needs of business. Employers want more relevant, flexible and cost-effective training. They also want more input into training content and stronger more responsive relationships with providers. A more competitive and effective market for vocational education and training, or training market, will help achieve these goals.* (ANTA 1996, p. 1)

The consultation paper presents a range of options for reforming existing administrative, delivery, funding and regulatory arrangements in the training market. At the time of preparing this chapter, ANTA was considering its response to submissions received.

Definitions of the training market

Originating from economic theory, the concept of a market has been used loosely in the past by policy-makers and planners to describe the relationship between learners and educational providers. In recent times, however, it has been applied in a more systematic and extensive manner to shape the provision of education and training services:

> *Although learning is not a commodity that can be mechanically bought and sold in the marketplace, the metaphor of demand and supply is a potentially useful one in relation to services that have learning as their main objective. The desire and propensity of individuals to engage in various learning activities can be defined as 'demand'. The provision of education and training programmes, courses, packages and other products/activities that aid conscious learning may be represented as 'supply'.*
>
> (OECD 1995, p. 11)

According to the Organisation for Economic Co-operation and Development (OECD 1995), the development of markets in post-school education and training along commercial lines is a necessary consequence of the increasing diversification of demand in terms of client groups, learning objectives, and the social, geographical and cultural situations of learners:

> *This diversity of demand clearly needs to be matched by a diversity of supply which is unlikely to be provided by any one type of institution, or even necessarily by a single nationally-supervised 'system' of education and training. The supply of educational services is starting to look less like a traditional public service and more like an industry—potentially with international as well as domestic 'outlets'.* (OECD 1995, p. 13)

The OECD identifies several supply-side trends which are contributing to the development of markets in post-school education and training; specifically, greater diversification of institutional frameworks, new learning technologies, and new financial frameworks.

Although the training market has become a central metaphor in Australian VET policy since Deveson (1990), the concept lacks clear definition (Anderson 1996b). Selby Smith notes that although the training market has been the focus of considerable debate in recent times, 'the content and meaning of the term generally has received less attention' (1995, p. 9).

ANTA suggests that the training market 'consists of individuals, enterprises and governments, on the demand side, interacting with public and private providers, on the supply side, for the delivery of training products which leads to a diverse and flexible national skills pool' (1996, p. 3). ANTA describes the framework for market structures in VET as a continuum running between 'pure public' and 'pure private' poles: 'In between these two extremes are a range of alternatives which range from government purchasing training through its public provider . . . to individuals and governments purchasing training from both public and private providers' (1996, p. 33).

Most analysts view the training market as being synonymous with the VET sector—generally understood to denote the sphere of post-secondary, non-degree level education and training (e.g. ACG

1994b). According to ANTA (1996, p. 3) 'the training market encompasses *all* of vocational education and training' which includes TAFE and non-TAFE providers. But as growing numbers of schools and universities enter the marketplace, the precise sectoral boundaries of the training market become increasingly unclear (Anderson 1996b).

Anderson notes also that both policy and research literature to date has overlooked 'the relationship between the development of a national training market in Australia and the emergence of global and regional markets in education and training services' (1996b, p. 34). The rapid expansion of modern communications technology and export education are likely to render national boundaries obsolete in the not distant future (OECD 1995).

Many researchers and educationalists question the relevance and efficacy of applying economic concepts and language to education and training (e.g. Anderson 1996b; Fooks 1995; Kell 1993, 1995; Kenway et al. 1993; Marginson 1993; Miller 1997; Ryan 1995). Although the OECD (1995) argues that the concept of a supply and demand relationship is useful for analysing educational provision, it acknowledges that it is problematic when applied to learning itself. In particular, it notes that with the increasing trend towards self-directed and autonomous learning, the line between supply and demand is becoming increasingly blurred. More generally, Ryan argues that 'the insights available from economic theory . . . are such that extreme caution is needed before utilising them as a basis for policy—specifically, for a policy of fostering markets in VET' (1995, p. 32). Despite such reservations, the concept of a training market is now widely employed by VET policy-makers and seems likely to retain currency for some time.

Policy principles and objectives of the training market

The lack of clear policy principles and objectives for the development of a training market has been noted by several analysts (Anderson 1996b). Selby Smith argues that the concept of a training market 'would appear at times to be used as a proxy for the desire to make the VET system more "efficient", more "responsive" or more "commercial"' (1995, p. 8). Lundberg (1994) suggests that in spite of the collective endorsement of the training market concept by Commonwealth, State and Territory governments, the policy objectives remain 'fuzzy'.

Official policy statements and government-commissioned reports express the policy objectives of a training market in terms of promoting greater efficiency and effectiveness in the delivery of VET programs and services. Deveson (1990) suggests that a market-driven approach to VET aims to raise the quantum of training provision; increase choice and diversity for the consumer; reduce training costs; and generally enhance the efficiency, quality and responsiveness of training delivery.

Burke et al. (1994) state that the purposes of developing a training market are to provide competition for TAFE, stimulate efficiency, and increase private sources of finance in a period of tight public funding. In addition, 'one of the main reasons for stimulating the development of a market is to increase awareness of both the content of VET and, for employers, awareness of their particular needs and the capacity to have them met' (Burke et al. 1994, p. 62). Fisher (1993) argues that the creation of a national training market is intended to promote responsiveness, flexibility, cost-effectiveness, diversity and innovation.

Noting the lack of a clear and coherent set of policy objectives, the National Centre for Vocational Education Research (NCVER 1997, p. 3) suggests that the aims of developing a competitive training market are to:

- stimulate greater competition among public and private providers and thereby increase incentives for providers to respond to client needs, particularly enterprises/industry
- enhance efficiency and effectiveness in publicly funded training
- increase private investment in training by individuals and enterprises/industry
- promote the development of a more integrated and nationally consistent training system

Foyster (1997) observes that the emphasis on competition in recent policy developments 'is frequently confused with the market concept. Often competition and markets are viewed as synonymous when in fact a market can be either competitive or uncompetitive' (1997, p. 1).

As noted in NCVER (1997), several analysts have commented on the existence of a policy conflict between the principles of competition and co-operation underlying recent training market reforms. Lundberg argues that 'it is probably only in the context of greater clarity on the question of what kind of "open training market" is being sought that concrete meaning can be given to "competition" and "co-operation" as policy principles in the training reform agenda' (1994, p. 9).

Pre-conditions for an effective training market

The establishment of an effective training market requires certain pre-conditions to be met. According to Burke et al. (1994) the development of a competitive training market necessitates the existence of:

- a large number of actual or potential buyers and sellers
- a relatively standardised or homogeneous product
- sufficient (if not perfect) information about levels of supply and demand

Research suggests that these three major pre-conditions have not yet been satisfied. First, the supply side of the market is presently 'thin' due to insufficient numbers of private providers both of trade and technical training, and in non-metropolitan areas (ACG 1994b; Anderson 1995a, 1996a; WADOT 1995, 1996a, 1996b). Secondly, the precise nature of products in the training market lacks adequate definition (Anderson 1996b; NCVER 1997). This is compounded by a lack of common product descriptors to reflect the distinctive characteristics of products in a consistent manner (ACG 1994a, 1994b). Thirdly, research shows that the quantity and quality of information on training supply and demand is presently insufficient (NCVER 1997).

Other pre-conditions identified in the literature include the need to: establish a direct relationship between clients and providers with minimum external interference; ensure that barriers to market entry remain low and that a state of competitive neutrality exists among providers; and improve the responsiveness of the supply side of the training market through the application of the national competition principles (see variously ACG 1994a, 1994b; ANTA 1996; Selby Smith 1995; Selby Smith et al. 1996; Taylor 1996). Others have emphasised the need to establish a consistent set of rules and expectations to govern the behaviour of participants in the training market (ACG 1994b; Fisher 1993; Fooks et al. 1996; Schofield 1996; Ryan 1995).

Several commentators contend that reforms to date have failed to realise government policy objectives either because of an imperfect understanding of the pre-conditions for an effective training market, or because of a partial application of competition principles to training market development. The Allen Consulting Group (ACG 1994a, 1994b) and Selby Smith (1995) argue that government has been overly concerned with reforming the supply side of the market and promoting competition among providers at the expense of demand-side reforms to increase client choice. Other factors are identified as having contributed to sub-optimal outcomes including: barriers to market entry for small enterprises, imperfect information about supply and demand, a lack of transparency in costing/pricing structures and unnecessary government regulation of the marketplace. As a consequence, Wiltshire reports that: 'the so-called training market . . . is not, at present, a pure market. In particular, it is not demand driven, it is provider and funding driven. Moreover there is not perfect knowledge in the market because there is not a complete sharing of information throughout' (1997, p. 3).

Available research supports the general proposition that there is a need to strengthen the demand side of the market. A survey of enterprises by Coopers and Lybrand finds that 'employers believe there is little capacity to influence the training system at the current time, that this situation has not changed over the past few years, and that they are interested in exercising considerably more influence' (1996, p. 5). Research on TAFE student perceptions of training market reforms suggests that they also wish to exercise greater influence over the policy priorities and directions of their providers and the VET system as a whole (Anderson 1995c; Anderson & Hoare 1996).

Other analysts are critical of the undue emphasis which they claim is being placed on promoting competition in the training market for its own sake. In the absence of all the necessary preconditions for an effective training market, they suggest that such an approach may be counterproductive. Fooks et al. argue that:

> *The approach adopted by some governments . . . to bring about a greater client focus has relied in the main on attempts to create a competitive market for training in the hope that competitive forces would suddenly cause dramatic changes in TAFE. This has been an extremely blunt policy instrument, one guaranteed not to produce the desired effect for many years if only because of the failure to entice significant numbers of genuine alternative providers into the market.* (Fooks et al. 1996, p. 4)

Taylor (1996) cautions that promoting greater competition should not be viewed as an end in itself, but rather as a means to achieve greater efficiency and quality in training provision. Taylor finds that the development of competitive strategies for the training market has been 'slow' and highlights the need for 'a coherent national strategy for market-linked reform' (1996, p. 124). Coopers and Lybrand conclude that 'the major danger . . . is that in a training system that is still relatively immature in its understanding of effective competition, a focus on short term gains will develop at the expense of the long term commitment to build a high quality, national training system' (1996, p. 6).

Failure of the training market

General agreement exists in the literature that VET makes an important contribution to social and economic development (ACG 1994a, 1994b; Finn 1991; FitzGerald 1994; Sweet 1993, 1994). Research suggests, however, that markets are subject to various types of failure which may reduce or negate the social and economic externalities (i.e. 'spill over' or flow-on effects) of VET:

> *In general, market failure occurs when market operations alone fail to result in optimal levels of provision or accepted standards of efficiency or fairness . . . In the context of vocational education and training, market failure means that, by itself, the market is unlikely to invest in socially or economically optimal levels of training.* (ANTA 1996, p. 14)

According to ANTA (1996), market failure may occur when: prices negotiated between providers and clients for the exchange of goods and services do not adequately reflect externalities; public good attributes are unlikely to attract private financing; insufficient competitive forces are present to ensure effective resource allocation; and information systems are inadequate to fully inform market participants.

ACG (1994a, 1994b) identifies several causes of potential failure in a training market including: the absence of perfect or sufficient information on training supply and demand; deficiencies in information transmission about the value of VET to enterprises and individuals; and insufficient incentives to maintain high standards of service quality, access for disadvantaged groups, and consumer protection. Research suggests that markets based solely on the training decisions of private individuals and enterprises in isolation can lead to under-investment in key industry and occupational sectors. Such instances of market failure can, in turn, produce collective economic problems such as the recurrence of general skills shortages and increased levels of unemployment with undesirable economic and social consequences (ACG 1994a, 1994b; Anderson 1994; FitzGerald 1994; Lundberg 1994).

Sloan (1994a) identifies several causes of failure in the market for worker training. On the supply side, employers may under-invest in training due to riskiness and imperfections caused by a range of factors such as: high rates of worker turnover; poaching by other firms; purportedly high training wages for apprentices; and imperfect access to capital. On the demand side, employees may under-invest in training due to an inability to fund their own training (either through forgone wages or lack of access to capital), or because of imperfect information about the costs and benefits of training.

Other analysts question standard economic accounts that suggest that employers under-invest in general training because of their inability to capture the benefits of skill development (due to staff turnover, poaching etc.). Sweet (1990) argues that firms are more concerned about quality and value than cost, and are more willing to invest in initial vocational preparation than is typically assumed in conventional economic analyses. FitzGerald (1994) maintains that the cause of sub-optimal levels of private investment in training is not poaching, but rather 'short-termism' and a failure by enterprises to appreciate the long-term implications of under-investment in internal training.

Dawkins (1988) suggests that among the main reasons for under-investment in training by Australian industry are: an historical reliance on skilled immigrants; negative management attitudes; and misunderstanding of the costs and benefits of training.

Critics consider that markets in education and training are inherently subject to serious failure because they value private gain, economic efficiency and consumerism at the expense of public and collective goods such as distributional justice, social equity, and democratic governance. They also argue that the logic of commercial markets tends to disorganise social and economic development, and skew the provision of training towards the short-term skill demands of individuals and enterprises at the expense of the longer term needs of industry and society as a whole (see variously Anderson 1995b; Blackmore 1991; Fooks 1995; Kell 1993, 1995; Marginson 1993).

Size, structure and composition of the training market

Conceptual frameworks for analysing the size, structure and composition of the training market are generally under-developed, and authoritative data is difficult to obtain (Anderson 1996b; Burke et al. 1996). Efforts have been made to segment the training market by funding mode, client type, qualifications, and fields of study with varying degrees of success (see variously ACG 1994b; Anderson 1994; Venning 1993; WADOT 1996b; Ward 1993). In most cases, the dimensions of the training market are analysed in terms of participation and finance. The following examination provides a brief overview of research on the profile of the national training market.

Deveson (1990) distinguishes between the government-funded TAFE sector which operates largely on non-market principles and the 'industry-funded training market' in which there is direct competition for resources and clients. According to consultants to the Deveson report, industry invested about $1.3 billion per annum in training during 1989, compared to government recurrent expenditure on TAFE which amounted to $1.6 billion. The consultants estimated that the industry-funded training market could grow by 50 per cent or $600 million by 1995. Deveson (1990, p. 11) also describes the structure of the training market in terms of 'a developing market for training outputs' (i.e. competencies) and a further developed 'series of markets for training inputs' (i.e. training staff, fee-for-service activities). The utility of this conceptual framework is limited in the absence of clear definitions of, and comprehensive data on, inputs and outputs in VET.

ACG (1994b) identifies three market sectors by funding mode: the first sector involves direct government funding of institutions—primarily TAFE—and is described as a *quasi-market* in which some market-like processes exist and at least implicit competition occurs. The second sector is the *funding market* or 'market for government training funds which are open to competitive tendering rather than channelled directly to institutions' (1994b, p. 49). This market sector comprises funding allocated on a competitive basis under three main groups of Commonwealth Government programs: the Australian Traineeship System; Labour Market Programs; the Adult Migrant Education Program; and ANTA growth funds allocated by State governments. The third sector is the *open or commercial training market* in which 'the ultimate users of training directly purchase training "products" from providers' (ACG 1994b, p. 49). ACG notes that this latter sector is the only one in which genuine market processes apply.

According to ACG (1994b), the overall size of the training market was between $6.5 and $8.6 billion in 1992. In terms of providers, the single largest sector was TAFE which accounted for around $3 billion in revenue, followed by: the 'supplier, equipment manufacturer' sector estimated to be between $1.0 and $1.7 billion; internal enterprise provision estimated at around $1.1 billion; the commercial training business and non-profit training organisation sectors each estimated to be between $0.5 and $1.0 billion in size; the adult and community education sector at between $250 and $500 million; industry skill centres at between $200 and $250 million; and the business college sector at between $60 and $150 million.

In terms of providers and clients, there were 704 TAFE institutions providing training to 1.7 million students in 1992. Most TAFE income (87%) is derived from direct payments from Commonwealth or State/Territory governments. Around 1200 registered private providers were offering accredited courses, but only an estimated 25 per cent of private providers were conducting accredited courses in 1993.

ACG (1994b) identifies Commonwealth and State/Territory governments as the largest group of purchasers, accounting for just under half of the total training market income. Training expenditure by enterprises accounted for an estimated 43 per cent of training market purchases (omitting trainee wage and salary costs). ACG found that large firms (100 or more employees) spent more than twice as much per capita as small firms (under 20 employees), and accounted for three quarters of enterprise training expenditure including wages and salaries.

The international market for Australian VET consists of training delivered both on-shore to private and government-sponsored full-fee-paying overseas students, and off-shore through programs funded primarily by the Australian International Development Aid Bureau (AIDAB) or by private clients (ACG 1994b). In 1993, about 12 per cent of all overseas students in Australia were enrolled in TAFE. There were 4409 students enrolled in TAFE diploma/certificate courses, representing about 50 per cent of all such enrolments in the VET sector. The remaining 4358 overseas students were enrolled in private provider certificate courses. Although there are presently no statistical data on the aggregate level of expenditure by overseas students in Australia, ACG estimates that total overseas student fees amounted to about $100-115 million in 1993, including about $45 million in Commonwealth Government funds for English Language Intensive Courses for Overseas Students (ELICOS).

Anderson (1994, 1996a) identifies three major market sectors on the basis of existing financial and regulatory arrangements. The first is a *regulated or closed market sector*, in which access to government funds is restricted to public training institutions, principally TAFE providers, and in which resource allocation and training delivery are subject to relatively high levels of government planning and regulation. The second is a *partially regulated or quasi-market sector*, in which government funds are allocated to public and private providers via simulated market processes such as competitive tendering and funding submissions, and in which training delivery is subject to partial government regulation (i.e. provider registration and course accreditation, performance agreements and contractual accountability). The third is a *deregulated or open market sector,* in which training providers (public and private) engage in direct competition for clients and resources (e.g. overseas students, industry training contracts) and in which training delivery is relatively free of government regulation.

Anderson (1995a) estimates that in 1993, the TAFE sector accounted for 79 per cent of all enrolments in courses leading to diploma and vocational qualifications, excluding those attained through the school and university sectors. The private (non-TAFE) training sector (including private sector and adult and community education [ACE] providers) accounted for the remaining 21 per cent, with industry skills centres and business colleges accounting for a total of five per cent. In terms of participation, the private (non-TAFE) sector was estimated to be about one quarter the size of the TAFE sector. In terms of training revenue, the private (non-TAFE) sector was estimated to be approximately 19 per cent larger than the TAFE sector. In terms of provider numbers, the partially regulated or quasi-market sector was found to be expanding due to steady annual increases in the number of registered private (non-TAFE) providers.

Anderson (1995a, 1996a) finds that unregistered private providers vastly outnumber registered private providers, and that the majority of registered private providers deliver non-accredited short courses. This finding is confirmed by more recent survey data which shows that in 1994 only 6 per cent of an estimated total of 3200 commercial training providers in Australia delivered government-accredited training courses (ABS 1996).

According to ANTA (1996), the supply side of the market consists of 84 TAFE institutes delivering 85 per cent of training and 2500 registered private providers (commercial, industry based, enterprises, and community based) and an unknown number of unregistered providers delivering 15 per cent of training. Training products include: preparatory vocational programs; entry-level vocational programs; advanced skills training; training to update skills; and programs for access and re-entry to the labour force. The demand side of the market consists of individuals; enterprises who spend $4.4 billion per year on training from public and private providers; and governments which spend $2.7 billion per year on training, mainly through TAFE.

Types and levels of competition in the training market

Prior to the training market reforms, competition between public and private providers was indirect and limited in scope, due largely to government policies which restricted access to government funds and recognition to public TAFE providers (Anderson 1996a). During the late 1980s and early 1990s, there was 'an intensification of competitive pressures in those areas of the training market in which genuine free or open market conditions prevail . . . and where government has taken steps to introduce quasi-market mechanisms such as competitive tendering for labour market program funds' (Anderson 1994, p. 158). As a direct result of recent government reforms to the legislative, funding and regulatory arrangements governing the VET sector, the type and level of competition in the training market is changing (ACG 1994a, 1994b; Anderson 1994, 1996a; Selby Smith 1995).

Intrasectoral competition in the public and private sectors tends to be stronger than competition between public and private providers (Anderson 1994). In the context of the quasi-market sector, 'the degree of competition among TAFE institutions (is) very heavily influenced by the priorities of each of the State TAFE systems and in turn those of their governments' (ACG 1994b, p. 51). Anderson (1994) found that competition between and within TAFE colleges is generally more intense than competition with private providers. Other sources of competition for TAFE include ACE providers (especially Skillshare) and universities (ACG 1994b; Anderson 1994).

Anderson (1994) finds that private providers tend to specialise in short course provision for niche markets, rather than compete directly with TAFE colleges in the market for publicly accredited programs. In this regard, private providers are '*complementing* public sector provision by "soaking up" unmet demand and *expanding the market* for post-school training' (Anderson 1994, pp. 155–56). Competition among private providers in the open market sector is intense. The degree of competition appears to be determined largely by the level of unmet demand in the public sector, and influenced by fluctuations in the level of government funding for TAFE sector provision (Anderson 1994).

According to ACG, 'the degree to which TAFE competes directly with private providers varies by State, depending on the commercial strategy . . . of the respective State training authorities' (1994b, p. 78). Competition between TAFE and private providers tends to have been strongest for Commonwealth Government Labour Market Program (LMP) funds which form part of the market sector where competitive funding processes apply (ACG 1994b; Anderson 1994). The share of LMP funding won by private providers through competitive tendering appears to have increased dramatically between the period from 1988 to 1994 (Anderson 1996a).

Competition between TAFE and private providers is also vigorous in the open or commercial market sector which includes fee-for-service activity and international education (ACG 1994b; Anderson 1994). Although competition between TAFE and private providers is increasing, 'TAFE colleges occupy a dominant position . . . in all segments of the training market', particularly the largest school-leaver market (Anderson 1994, p. 154).

Competition between public and private providers is largely confined within State boundaries, although interstate competition appears to be increasing (Anderson 1994). Taylor (1996) identifies the federalist structure of the Australian VET system as the major impediment to the development of competition on a national basis and argues for greater consistency in approaches to training market development by State and Territory governments.

Models of competition and market reform

Models of reform which aim to increase competition in the training market can take one of two forms. They can increase competition among providers through reforms *on the supply side* of the market. In such cases, competition is driven by government rather than by clients. Alternatively, they can increase competitive pressures on providers through reforms *on the demand side* of the market. In these cases, competition is driven by clients rather than government (although government may purchase training on behalf of clients). Reforms on the supply side of the market can be structural, organisational and financial in nature, whereas demand-side reforms tend to be mostly financial.

Supply-side models

In recent years, most competition and market reforms have involved reforms on the supply side of the market which aim either to increase direct competition among providers, or enhance the influence of clients over the nature of training provision through indirect means (ACG 1994a, 1994b).

Supply-side reforms which increase the influence of clients over training providers by indirect means include: establishing mechanisms to facilitate industry input to government training policy and program priorities (e.g. ITABs and industry training plans/State training profiles); developing and delivering training courses and credentials against industry-determined competency standards and a national qualifications framework; promoting jointly funded training ventures between providers and clients (e.g. industry skill centres); linking government resource allocations to outcomes-based performance indicators (via provider performance agreements); increasing provider reliance on private sources of income (individual fees and industry contracts); and measuring provider performance against benchmarks for client satisfaction (e.g. client satisfaction studies). Various combinations of these strategies are currently employed by State training authorities in Australia, and in the United Kingdom (UK) Further Education sector.

Performance agreements

The allocation of government funds through regular performance agreements based on specified goals and targets is one option for fostering a more responsive training market. Such an arrangement 'embodies a purchaser/provider split with the central government as allocator of public monies establishing an arm's length, quasi-contractual relationship with semi-autonomous public sector agencies' (Curtain 1995, p. 94). Curtain identifies several characteristics of UK models which improve the effectiveness of performance agreements including: publication of performance goals and targets in annual provider reports; integration of client-focussed quality standards into performance goals and targets; and publication and dissemination of comparative performance data at the provider level (including output/outcome measures of course completion, qualification and post-course job placement rates).

Competitive tendering

Competitive tendering is a direct mechanism for stimulating competition among providers. Rather than channelling funds directly to institutions, government purchases training places from public and/or private providers on the basis of competitive bids. The aim of making public VET funds more contestable is to increase the efficiency, flexibility and responsiveness of publicly funded training provision.

As noted already, competitive tendering is used by the Commonwealth Government to allocate funds for LMPs, the Adult Migrant English Program, the Australian Traineeship Program and a number of other programs. State and Territory governments employ competitive tendering processes to allocate a proportion of ANTA growth funds, in addition to some other program funds under their control. For example, Commonwealth funding for the Pre-Employment Program is allocated via competitive tender in New South Wales and Victoria.

WADOT (1995, 1996a) identifies two approaches to competitive tendering that have been used by State and Territory governments in recent years. The 'quarantining approach' refers to the practice of allocating specified funds to private providers via competitive tender. Quarantining is essentially a transitional model of competition that enables funding authorities to phase in competitive tendering on a wider basis in a controlled manner. According to WADOT, it has the advantages of minimising the negative impact of competitive tendering on public providers, generating a larger pool of potential private competitors over the longer term, and enabling government to test and modify its administrative processes. The second approach is open or 'direct competition', which refers to the practice of opening up competitive tendering processes to both public and private providers. This is the end-point which a quarantining approach aims to reach.

According to the Steering Committee for the Review of Commonwealth/State Service Provision (SCRCSSP 1997), State and Territory governments allocated about $70 million of public VET funds by competitive tender in 1995, which included $21 million of ANTA growth funds (see table 1). In total, funds allocated by competitive tender accounted for two per cent of national recurrent expenditure on VET in 1995, of which 52 per cent was allocated to private providers and 48 per cent to public providers.

Table 1: VET recurrent expenditure allocated for public tender, 1995 ($'000)

Competitive tendering	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Recurrent expenditure	1 252 290	769 070	452 087	290 757	236 766	77 058	77 380	64 140	3 306 880
Funds awarded to public providers	11 939	12 695	2 479	4 070	1 346	452	502	1 355	33 441
Funds awarded to private providers	9 889	17 780	2 213	3 390	2 069	493	487	877	36 242
Total funds tendered	21 828	30 475	4 692	7 460	3 415	945	989	2 232	69 683

Source: SCRCSSP 1997

Preferred supplier arrangements

Preferred supplier arrangements (PSAs) are a variant of the competitive tendering model. Under PSAs, a limited number of providers are selected on the basis of past performance to participate in a competitive tendering process to deliver specified training services. Governments tend to use PSAs in market segments where insufficient numbers of high-quality providers exist to ensure effective price competition and program quality. As with competitive tendering, governments retain control over provider choice and resource allocation. Clients remain one step removed from the actual training decision.

Demand-side models

Demand-side competition and market reforms aim to increase competitive pressures on providers by empowering clients over providers. As identified in NCVER (1997), there are three key strategies for empowering clients in the context of a training market. These involve giving clients: maximum direct control over training decisions; sufficient information to make effective choices; and assistance to negotiate with training providers.

Of the three strategies, the most important one involves giving clients direct control over training decisions. As NCVER (1997) notes, training decisions occur in two stages: product choice and resource allocation. Product choice entails choosing between alternative training providers and courses, and selecting the desired characteristics of the training package including: course content; timing; sequencing; location; mode of delivery; assessment methods; and support services. Resource allocation involves the allocation of money or its substitute in return for an agreed package of training services. Four basic models, with some variants, exist for giving clients direct control over training decisions: fee-for-service; user choice; intermediaries; and vouchers.

Fee-for-service

Under a fee-for-service (FFS) model, 'the ultimate users of training directly purchase training "products" from providers' (ACG 1994b, p. 49). FFS arrangements give clients (individuals and enterprises) maximum direct control over both product choice and resource allocation. Market theory suggests that providers must supply training which satisfies the needs and preferences of fee-paying clients in terms of price, quality, relevance and value for money, if they are to survive in the training market. Consequently competition among providers under the FFS model is more direct than under any alternative model. FFS arrangements apply in the open or commercial training market sector, and supplement recurrent government funding in the public TAFE sector in the form of partial tuition fees and charges for non-academic services. In both cases, fees tend to paid up front prior to course commencement (ACG 1994b; Anderson 1994; NCVER 1997; Ryan 1995).

One variation of the FFS model is a combination of deferred fees and income-contingent repayments akin to the Higher Education Contributions Scheme (HECS) which applies to university-level students. Such a scheme has the potential to offset the disadvantageous impact of up-front fees on access, although some analysts dispute this claim. The application of a deferred fee payment scheme in the VET sector is problematic due to substantial constitutional/jurisdictional and administrative complexities (Ryan 1995).

User choice

'User choice' aims to strengthen client control over training decisions by enhancing the influence of employers and their employees over: who provides the training; where it is delivered; how it is delivered; and what is delivered (ANTA 1994b, 1996). Theoretically, employers and their employees (apprentices and trainees) jointly select a training provider with whom they enter direct negotiations to develop a customised training plan. Once agreement has been reached between the client(s) and provider, the appropriate funds are released by government to the chosen training provider. In this regard, user choice gives clients direct control over product choice (i.e. choice of provider, course and course characteristics), and indirect control over resource allocation. Government retains direct control over the allocation of resources. Various analysts note that it is unclear whether both clients (i.e. the employer and employee/student) will be able to exercise choice on an equitable basis under such arrangements (Fooks 1995; Ryan 1995; Selby Smith et al. 1996).

Intermediaries

Due to the imperfect state of information and the inability of certain client groups to exercise effective choice, attention has focussed on the need to provide clients with appropriate assistance (NCVER 1997). One strategy for improving the links between the supply and demand sides of the training market is to employ intermediaries as brokers between providers and clients. The role of intermediaries could include: collecting, analysing and disseminating information on training options; assisting clients to negotiate with providers in order to make effective choices; and making training decisions on behalf of clients (NCVER 1997).

Curtain (1995) identifies a potential role for intermediaries as purchasers of training services based on two models developed in the UK and Europe. The first model involves government-established and funded intermediaries such as the UK Training and Enterprise Councils (TECS). TECS are separately incorporated, controlled and managed bodies to which government delegates responsibility for allocating training funds within a framework of operational guidelines and accounting procedures. Under this franchising arrangement, such bodies operate as relatively autonomous brokers who match clients with training providers and, in the case of unemployed youth, with employers. The second model is based on public law or compulsory chambers of commerce which operate in parts of Europe. It involves the allocation of funds to independent intermediaries who are not subject to the same government-imposed constraints as apply under the former model.

Vouchers

Vouchers are certificates or statements which entitle holders to purchase education and training services up to a specified financial limit from a government-approved provider of their choice. Additional services which cost more than the government-determined value of the voucher may be purchased privately by the client through a 'topping-up' mechanism. Voucher-based systems have been employed in school systems in certain states of the USA and in the UK, where they take the form of 'training credits' for unemployed youth.

Education and training guarantees are another form of voucher which entitles holders to a defined amount of publicly funded education. Youth guarantees which entitle young people to two years of post-compulsory education and training have been considered by various government committees in recent years in Australia, but have not yet been implemented (Lundberg 1994).

One local variation of the voucher mechanism is 'user buys', which was originally proposed by ACG (1994a). Although the underlying principles of the two models are similar, user buys differs from a voucher scheme in that it treats both the employer and the employee/student, specifically apprentices and trainees, as the joint client. The rationale advanced for this variation is that the imperfect state of information about training options, employment opportunities and career paths reduces the capacity of students/trainees to make effective choices on an individual basis. ACG also argued that because employers are the end-users of VET skills and qualifications, they should have a prominent role in training decisions. User buys was subsequently modified into user choice on the grounds that giving public resources to enterprise clients 'may involve business in unnecessary contractual and audit requirements' (ANTA 1994a, p. 31).

Analysis of models

Evaluating the relative advantages and disadvantages of different resource allocation mechanisms is a complex task involving consideration of a diverse range of issues and competing policy objectives. For this reason, and because many of these funding models are relatively new and untested, no consensus has yet been reached about which models are most appropriate for the Australian VET sector.

ANTA (1996) notes that 'there are no "right and wrong" answers' for how a particular market should be structured. It argues that different market arrangements can co-exist within a single market framework, and that the selection of models should take account of prevailing market conditions and desired outcomes. In particular, 'consideration must be given to who is making the purchasing decision and the degree of contestability of the market' (ANTA 1996, p. 33).

Curtain is critical of existing performance-agreement-funding models in Australia due to 'the heavily centralised nature of decision making about future demand for courses, utilising limited knowledge of actual client needs' (1995, p. 95). He also highlights the tendency for such models to limit the accountability of individual providers to clients as a result of governments adopting a narrow focus on measures to reduce costs while maintaining or expanding services.

Competitive tendering is generally considered to achieve greater improvements in market efficiency as it increases direct competition among providers. But because government retains control over decisions about both product choice and resource allocation, competitive tendering 'strengthens supply-side competition but does not necessarily enhance market responsiveness or empower clients' (NCVER 1997, p. 9). Concerns have also been expressed about the potentially negative impact of competitive tendering on: educational quality; access and equity; provider planning; and organisational stability (see variously Anderson 1994; Carmichael 1992; Fooks 1995; Kell 1993, 1995; Lundberg 1994; Yeatman 1994). Although a national study of competitive tendering processes by WADOT (1995, 1996a) found little evidence of negative consequences, it highlights other problems including: high administrative costs; resource-intensiveness; and increasing private provider dependence on government funds.

Market advocates favour demand-side models of competitive resource allocation over supply-side models 'with the individual client exercising direct market choices in accessing training from suppliers, *wherever the conditions for this to apply can be met*' (ACG 1994b, p. 204). Elsewhere, ACG (1994a) argues that recent government initiatives have placed inordinate emphasis on supply-side reform at the expense of demand-side concerns, and have been too centralist in their approach. Consequently, ACG recommends that governments should refocus on strategies to stimulate competition through the demand-side of the market by empowering clients to allocate public training resources at the local enterprise level.

Advocates of free-market competition in VET argue that the FFS arrangements are the most efficient and effective market mechanism, as clients exercise total control over training decisions and providers are forced into direct demand-driven competition. Research suggests that provider competition in a FFS environment is more intense and direct than under alternative models of resource allocation (Anderson 1994; ACG 1994b). ANTA (1996) notes that FFS activities promote private investment in training.

Critics argue that market imperfections, especially the lack of sufficient information, limit the capacity of clients to exercise effective choice in a free training market. They also argue that FFS arrangements are inappropriate in a VET system which is expected to pursue non-economic policy objectives such as improved access and quality (Anderson 1994; Barnett 1994; ESFC 1989; Lundberg 1994; Ryan 1995).

User choice is nominated in government-sponsored reports as the preferred model of competitive resource allocation in the training market (ACG 1994b; ANTA 1994b; Coopers & Lybrand 1996). Specifically, it is argued that by shifting control over product choice from government to clients, user choice empowers clients to determine 'the success or otherwise of providers that are willing to respond to those preferences' (Coopers & Lybrand 1996, p. 68). In effect, user choice is seen to promote greater efficiency and responsiveness in the allocation of public training resources by stimulating direct demand-driven competition among providers.

Although user choice is yet to be fully implemented, critics argue that it may have adverse effects and unintended consequences including: a fragmentation of the national training effort; loss of community access to publicly funded training facilities; exacerbation of gender and social inequities; a reduction in quality; fewer economies-of-scale; substitution of public for private funding; and insufficient public accountability (see variously Anderson

1995b; Fooks 1995; Gonczi 1996; Ryan 1995; Selby Smith et al. 1996). Such analysts consider user choice to be an inappropriate model for the VET sector.

Various forms of intermediaries already operate within the training market (ACG 1994a; DEETYA 1996; NBEET 1996). According to Curtain (1995), the major disadvantage of government-established and funded intermediaries is that such bodies tend to respond to centrally determined performance measures and administrative guidelines rather than client needs and preferences. In his view, independent funding intermediaries represent a superior model for stimulating demand-responsive training provision as they have greater scope for managing and adapting government funds to the local skill requirements of business and industry clients. The only proviso is that independent intermediaries should be owned and controlled by business and broadly representative of constituents (Curtain 1995).

Under the latter model, ANTA notes that 'tighter quality controls and accountability mechanisms may be needed to protect the consumer' (1996, p.11). Other potential drawbacks associated with the use of intermediaries include: the creation of a new layer of bureaucracy; and conflicts of interest where the intermediary (e.g. Group Training Company) is also the provider and employer (ANTA 1996; Fooks 1995). Fooks (1995) argues that the use of intermediaries counteracts the objective of establishing more direct client-provider relationships.

Voucher-based mechanisms and variants such as user buys accord clients the same degree of control over training decisions as in user choice, but additionally give them ultimate control over the allocation of resources. For this reason, Curtain (1995) suggests that they are superior instruments of demand-side market reform. Research from the UK suggests that training credits have done little so far to empower clients (individuals and employers) and have had 'limited impact on the training market' (Coopers & Lybrand 1994, p. 4). But the slow rate of change may owe more to the lack of sufficient implementation time and market imperfections (e.g. lack of information, insufficient numbers of competing providers) than to flaws in the model itself.

Vouchers appear to have other potential advantages over alternative demand-side models of competition and market reform. Provided that the store of value is sufficient to cover the costs associated with extra support services for disadvantaged clients, vouchers and user buys theoretically avoid the negative effects of FFS on access to VET. But such models are relatively untested and their full impact on educational quality and social equity is unknown (Lundberg 1994; Ryan 1995). Moreover, many of the criticisms made of user choice apply equally to vouchers and user buys.

Research suggests that different models of competitive resource allocation are appropriate for different segments of the training market depending on prevailing market conditions and desired policy outcomes (NCVER 1997). FFS and competitive tendering arrangements are most effective where large numbers of alternative providers exist (ACG 1994b). PSAs provide a mechanism for promoting provider competition and safeguarding quality when markets are 'thin' (WADOT 1995, 1996a). Although PSAs offer the potential for greater efficiency and stability in training provision, they may limit genuine competition due to the potential lack of openness and transparency in funding decisions (WADOT 1995, 1996a). User choice does not necessarily require large numbers of training providers to be effective, although client influence and market efficiency are considerably enhanced when there is a diverse range of suppliers (Selby Smith et al. 1996).

Arguments that non-trade students in VET should be excluded from exercising user choice due to economic externalities and the lack of 'employer sponsors' are open to question. In support of demand-side models over supply-side mechanisms for resource allocation, ACG contends that 'the aggregation of individual preferences for types of education and training will generally reflect labour market demand more effectively than decisions taken by smaller groups of education and training officials with access only to imperfect information about the labour market and about the needs of enterprises' (1994a, p. 137). Similarly, it can be argued that decisions taken by individual employers in response to firm-specific needs are also unlikely to reflect either the full range of current or future skill requirements in industry and the labour market (FitzGerald 1994).

There is no evidence to suggest that non-trade students in VET are any less informed about labour market demand or less capable of exercising market choices than are (generally younger and less experienced) apprentices/trainees. As ACG (1994a, 1994b) notes, self-funded individual students already exercise considerable choice in the open or commercial training sector without any apparent adverse economic consequences. Ryan suggests that 'individuals . . . are, in the medium term, adept at picking swings in career opportunities' (1995, p. 37).

Individual vouchers are deemed to be inappropriate for the VET sector on other grounds. ACG (1994a) argues that a voucher-based system would be difficult to develop due to the extreme variation in the costs and length of VET courses, together with the inadequate nature of information about real costs in the VET sector. Both these factors 'appear to preclude any general move to introducing an *individual* voucher system in the immediately foreseeable future and at the same time suggest some practical difficulties in setting a value on vouchers' (ACG 1994a, p. 138). Sweet agrees that the lack of detailed information on cost structures creates some difficulties in setting the value of vouchers but contends that 'this is not an insoluble problem' (1994, p. 78).

Research suggests that a blended approach to the use of competitive funding mechanisms may produce new models with possible advantages over existing ones (ACG cited in ANTA 1996). Fooks et al. (1996) have proposed a mixed-funding model for the national training market which comprises: user choice; open tendering; and base grants for individual TAFE institutes. Further research is required to determine the feasibility and desirability of different competitive funding mechanisms, and combinations thereof, for different market segments.

Due to market imperfections, social externalities and administrative costs, research suggests there are several market segments in which competitive funding processes may be inappropriate. Specifically, these include training for: small business; rural and regional communities; school leavers; special-needs groups; and short-course provision (NCVER 1997). Even in these market segments, market advocates argue that demand-driven models of competitive resource allocation should be favoured over supply-side models such as competitive tendering and direct institutional funding. In cases where 'individuals cannot readily exercise their own market choices, the most appropriate government response is to support mechanisms to restore or enhance their ability to do so' (ACG 1994b, p. 187). Strategies for enhancing client choice in the training market are discussed in NCVER (1997).

The role of government

The development of a competitive training market entails a fundamental revision of the traditional role of government in relation to VET provision. Throughout its long history in Australia, VET has been viewed primarily as the responsibility of government. Prior to the development of a training market, the formal VET system in Australia was characterised by public provision, funding and regulation (Anderson 1996a). The seminal Kangan report (1974) argued that vocational education should be planned, co-ordinated and delivered by government through an integrated system of publicly owned and controlled TAFE institutions, in combination with non-profit ACE organisations. Underlying Kangan was a conviction that subjecting TAFE to the vagaries of market forces and the profit motive would jeopardise its vital contribution to social and economic development.

Until the mid–1980s, the Kangan approach went largely unchallenged, with the result that it defined and underpinned the role of government with respect to VET. Critics of competition and market reform in VET maintain that the Kangan principles are equally relevant to contemporary conditions and should therefore continue to shape and inform the role of government. Rather than allow private profit, competition and commercialism to determine the provision of VET, they argue that government has a basic responsibility to distribute the benefits of VET according to social and economic need, and in the wider public interest (e.g. Anderson 1995b; Kell 1993, 1995; Miller 1997).

Deveson (1990) signalled a major shift in official definitions of the role of government with its promotion of a market-based approach to VET provision. In essence, Deveson advocated 'the establishment of a training partnership' between government and industry (1990, p. 61). Deveson argued that industry should assume increasing responsibility for, and control of, the provision and funding of VET. In Deveson's view, government's role is to complement business and industry by establishing an environment which facilitates optimal levels of private investment and participation in VET. This entails maximising the scope for competition and client choice in a training market while at the same time protecting public good attributes such as quality and access.

Building on the Deveson model, ACG (1994a, 1994b) argues that the main role of government is to provide the policy framework, and set the rules and standards for market operation. This entails: maintaining the integrity of public VET credentials as 'social currency' so as to facilitate wide recognition and portability of skills; correcting market failures, particularly in relation to information and equity of access; and ensuring quality and consumer protection through course accreditation and provider registration. From ACG's perspective, the central aim of the regulatory role of government should be to promote competition. According to ACG, the social objectives of VET can be accommodated through special government measures to control standards of service quality, and to protect equity and other social concerns.

In relation to industry training, FitzGerald (1994) identifies two key objectives for government: first, to ensure that the pool of skilled labour is sufficiently broad, deep and mobile (with ready portability of skills) to contribute to economic dynamism and adaptability; and secondly, to provide assistance in managing collective problems such as the recurrence of general skill shortages which may be immune to, or even exacerbated by, individual decisions taken by firms.

Increasing emphasis has been placed on the need for government to withdraw from its traditional role as the dominant funder, provider and regulator of VET delivery (ACG 1994a, 1994b; Selby Smith 1995; Taylor 1996). In accordance with the Hilmer competition principles, these reports propose that government should view itself primarily as a *purchaser* of programs and services on behalf of the taxpaying community, a *facilitator* of market competition, and a *regulator* of market behaviour. According to ACG, this new market model necessitates making a clear-cut distinction between the roles of central government (i.e. market facilitator, market regulator, and purchaser) on the one hand, and the role of providers as *service deliverers* on the other hand. Typically it involves strengthening both local management autonomy and accountability for outcomes 'under a light central co-ordinating role', and stimulating efficiency and responsiveness to clients through increased competitive pressures on service providers.

The rationale for creating the purchaser/provider split is that potential conflicts of interest may arise if government is simultaneously both the sole or main purchaser *and* the sole or main provider of VET programs and services in competition with private providers. It is argued that such conflicts of interest may result in inefficient pricing and resource allocation (ANTA 1994a, 1994b; ANTA 1996; Selby Smith 1995).

ANTA (1996) proposes that the role played by government should entail 'providing a regulatory framework for the operation of the competitive market, and responding to market failures and promoting equity' (1996, p. 13). Two important factors which must be taken into account when determining the appropriate nature and extent of government involvement are: the extent to which a market is, or can become, contestable; and the federal structure and division of power among Commonwealth, State and Territory governments. According to ANTA, the two key roles identified for government suggest that it should pursue its responsibilities by fulfilling four key functions: as funder, purchaser, provider and regulator. Some examples of government involvement are listed in table 2.

Table 2: Some examples of government involvement in the training market

Role function	Facilitate and shape market	Respond to market failure and promote equity
Funder	Shift public resources to fund areas of high training priority Transfer funding to clients for purchase (e.g. user choice)	Provide funding to meet under-investment Transfer funding to intermediaries to purchase on behalf of clients
Purchaser	Tender to public and private providers	Purchase on behalf of individuals not well placed to make market decisions (e.g. through information failure) Profile funding with clear contractual arrangements of specified outputs Purchase places targeted for equity groups
Provider	Establish basis for TAFE to operate commercially	Ensure supply of training where providers not present in market or market is subject to natural monopoly (e.g. owing to high cost of entry)
Regulator	Establish basis for interstate competition Establish admission systems which facilitate client/student choice and provider marketing Ensure competitive neutrality between providers	Regulate operations of provider (public or private) where market is subject to monopoly Provide market information to clients and providers (including labour market information) Publish performance information

Source: ANTA 1996

Free-market liberals argue that there is limited, if any, justification for government intervention in education and training markets, either in the form of subsidisation or regulation (Borland 1990; Chapman & Stemp 1992; Sloan 1994a, 1994b). Sloan (1994a, 1994b) contends that government intervention in the market is likely to be more detrimental than market failure. Chapman and Stemp state that 'if there is training under-provision in Australia it is the consequence of misguided rules and policies associated with labour market regulation and the removal of these impediments is the appropriate government strategy' (1992, p. 354).

OECD (1995) observes that there is considerable uncertainty about the appropriate nature of government's future role in relation to post-school education and training, especially with the emergence of 'information superhighways'. It argues that 'there is a strong case for governments to play a strategic or "steering" role in relation to sectors where they cannot necessarily expect to be the main provider of services, but where there is value in influencing or providing a coherent framework for a range of providers' (1995, p. 37). Such a role may involve partnerships with providers or market regulation. A key question is whether governments should be viewed as 'highway-builders' or as 'traffic planners':

> *The expected impact of information superhighways has caused free-market advocates to worry that there will be too much planning, and planners to worry that there will be chaos. Between the two extremes, there is widespread acknowledgment that the government's role will be significant, alongside a high degree of activity by the private sector. Yet there is no consensus about how exactly to divide responsibilities between the public and private sectors.* (OECD 1995, p. 40)

Wiltshire (1997) reaches similar conclusions in a review of factors affecting the training market in Queensland. He argues that 'in the light of . . . the increasing emphasis on the market as a driving force, it is time . . . to consider public and private roles in the VET sector' (1997, p. 7). According to Wiltshire, the future division of responsibilities between the public and private sectors is 'the pivotal question' in the debate about competition and market reform in the VET sector. On the one hand, there are 'private providers who wish that government would simply "wither away" in VET, just as there are no doubt others of the contrary opinion' (Wiltshire 1997, p. 41).

The challenge for policy-makers is to define the functions which could be considered as legitimate roles for government 'even though the delivery of many of them could be achieved by either public or private provision' (Wiltshire 1997, p. 7).

Funding of the training market

Prior to the inception of the national training reform agenda in the mid-1980s, TAFE was almost wholly subsidised by government. Revenue for recurrent and capital expenditure was raised through a universal tax-funded system in the belief that the benefits of TAFE are shared equally among the immediate participants on the one hand, and society and the economy on the other. This approach reflected the widely held commitment to the principle of 'free public access' to TAFE which stemmed, in part, from the Kangan report (1974). Kangan argued that the significant short-term costs of establishing a universally accessible public TAFE system were justified on the basis of the long-term benefits to individuals and society at large:

> *The achievement of the reality is . . . fraught with difficulties, not least of which is economic. The cost to the community presents it with one more in the long series of economic choices which make up political as well as private life. The present cost must be weighed against possible future gain to the individual and society.* (Kangan 1974, p. 30)

Following the Kangan report, the federal government increased recurrent and capital expenditure on TAFE, introduced subsidies for needy students, and placed a prohibition on tuition fees for tertiary (including TAFE) courses. In subsequent years, however, the long-term viability of the Kangan goal of unrestricted access has been called into question, due to increasing social and economic demands on the public TAFE system in a context of diminishing resources (ESFC 1991; Hawke & Sweet 1983; Scott 1989).

At the opposite end of the ideological spectrum, free-market liberals argue that private individuals rather than taxpayers should subsidise the costs of training. In their view, training is an activity in which individuals invest in expectation of a private financial return. Invoking the 'user-pays' principle, free market liberals hold that employers and employees should be responsible for meeting the costs of training in direct proportion to the benefits they enjoy. They argue that employees enjoy most of the benefits of generic training and should therefore be responsible for meeting the associated costs. On the other hand, they contend that both employers *and* employees enjoy the benefits of firm-specific training. Benefits accrue to employers in the form of increased productivity and profit, and employees enjoy future wage increases and greater labour market flexibility. Hence as the joint private beneficiaries of specific training, employers and employees should share the cost burden accordingly (Sloan 1994a, 1994b).

In between the opposite poles of 'free public access' and 'user pays', Deveson (1990) proposes a mixed model of funding which combines elements of both approaches. In determining the appropriate distribution of financial responsibility among the various stakeholders, Deveson employs the distinction between generic and specific training as a general 'rule of thumb'. He proposes that the public benefits of generic training are great enough to justify a continuing contribution from the government/taxpaying community. But Deveson argues that government funds are 'inevitably restricted' and that 'it is not reasonable for the training system to be expected to expand capacity at the public expense' (1990, p. 35). From Deveson's perspective, the private benefits of generic training enjoyed by individuals and industry/enterprises are sufficient to justify private contributions. Accordingly, Deveson invokes the principle of user pays to argue that the cost burden of generic training should be shared more equitably among the three major beneficiaries: individuals, industry/enterprises and the government/taxpaying community. However, 'to the extent that enterprises want more specific training, it is reasonable that they should meet the cost' (Deveson 1990, p. 35).

Following Deveson (1990), a general consensus has been reached that a strong case exists for substantial public subsidisation of generic training, now referred to as initial or entry-level training (NBEET 1992; Sweet 1993, 1994):

> *The externalities are so high as to justify a major public role in funding. The community has a strong interest, as do individuals and enterprises, in the widespread acquisition of portable and generic vocational skills and qualifications. After individuals have gained such skills and qualifications the funding of further skill development can be argued to be largely their responsibility and that of enterprises. But prior to that point the community has an obligation to fund vocational education and training.*
>
> (Sweet 1994, pp. 76, 78)

Shreeve (1995) questions the utility of the distinction between initial and post-initial training as a basis for allocating financial responsibility due to the difficulty of defining clear boundaries.

According to ACG (1994a), the nature and scope of government's funding role should be determined by a consideration of the social and economic externalities of VET. Like Deveson, ACG argues that both social and economic grounds exist to support a major role for government in the funding of: entry-level training; remedial training for the unemployed; and special measures to ensure access to training by disadvantaged groups. Economic considerations, on the other hand, do not justify a significant role for government subsidisation of industry training. Rather, the private beneficiaries of post-initial training (i.e. enterprises and individuals) should share joint responsibility for meeting the costs. Although there may be some justification for government funding in cases where under-investment occurs, 'the *extent* of resources provided, relative to what enterprises and individuals contribute, depends on assessed social benefits and costs and is a matter of priorities' (ACG 1994a, p. 69).

Research shows that models for evaluating the costs and benefits of VET are under-developed (Burke 1995a, 1995b; Maglen 1990, 1993; Maglen et al. 1994). The OECD notes that 'the optimal division of funding responsibilities . . . remains an important point for discussion' (1995, p.14). In particular, it argues that although the notion of shared funding responsibilities has gained wider acceptance, mechanisms for cost-sharing need to be carefully designed to ensure that they do not reduce access for those unable to pay.

Regulation of the training market

Most analysts accept the need for government regulation, given the potential for market failure to jeopardise the public-interest objectives of VET. Opinions differ over the degree of regulation required.

As noted already, free-market liberals favour market forces over government regulation as a mechanism for ensuring optimal private returns on investment in training (Borland 1990; Chapman & Stemp 1992; Sloan 1994a, 1994b). Government regulation of training is seen to contribute to uneconomic outcomes due to the costs involved in establishing and maintaining regulatory mechanisms, and the consequential costs of compliance borne by private providers (Martin 1995; Sloan 1994a, 1994b). Moreover, the bureaucratic requirements associated with government regulation are said to inhibit the flexibility and responsiveness of private providers (ACPET 1995; Anderson 1994). As a consequence, private providers claim to have 'lost some of the uniqueness that has given (them) a special niche in the market' (Martin 1995, p. 181).

Deveson (1990) argues that an appropriate degree of regulation can assist the effective operation of the market by promoting quality and portability of skills recognition. Specifically, he identifies a need for effective accreditation and certification mechanisms for industry and private providers. Other benefits are that regulation increases efficiency in training by: recognising skills in the workforce; reducing duplication of effort; and encouraging better resource utilisation. However, Deveson argues that because government regulation can distort the efficient operation of the market, 'it needs to be applied with a light hand' (1990, p. 36). In order to minimise costs and duplication of effort, Deveson argues for a national approach to market regulation.

Following the Deveson model, significant reforms to the regulatory structure for VET were initiated in an effort to promote the development of a national training market. The most notable reform was the development of the National Framework for the

Recognition of Training (NFROT). Initially formulated by the Vocational Education, Employment and Training Advisory Committee (VEETAC 1991), NFROT provided the mechanism whereby training delivered by registered private and industry providers could be granted equivalent public recognition to TAFE courses.

Uppermost in ACG's order of regulatory priorities is the need for government to maintain the 'social currency' of the training market through a national system of provider registration and course accreditation which promotes the recognisability and portability of VET skills. ACG argues that 'the role of government in registration and accreditation should . . . ensure maximum opportunity for entry to the training market while ensuring necessary *consumer protection* and in particular, protection of the system of public qualifications' (1994b, pp. 187–188, their emphasis). In support of these objectives, ACG (1994a) proposes that a 'code of best practice' be developed to which public and private providers should commit in exchange for public funds. To build a sense of ownership among enterprise clients, ACG (1994a) suggests that, wherever possible, industry should exercise the accreditation function (in effect under delegation).

A consistent theme running through recent proposals for regulatory reforms is the need for greater simplicity, flexibility, and accountability at the interface between provider and client (NCVER 1997). ACG (1994a) argues that 'government regulation of and intervention in the market is constricting rather than fostering its development' (ACG 1994a, p. iii). ACG reports that: provider registration and course accreditation systems are inflexible, costly, and unnecessarily bureaucratic; the rules for market operation are inconsistent and unclear; and the roles and responsibilities of key stakeholders at all levels of the system are confused. ACG proposes that existing structures be rationalised and streamlined in such a way as to promote a demand-side focus for training market reform, and to facilitate more direct interaction between providers and clients, especially enterprises.

Taylor argues that 'regulation should be applied sparingly' (1996, p. 135). He suggests that existing regulatory structures and processes in the VET system are unnecessarily complex and require simplification. Taylor proposes that the number of points of (and players involved in) central regulation of the training recognition system should be reduced in order to emphasise continuous improvement rather than up-front regulation, and to allow clients 'to demand and reward quality provision in a more market-oriented system' (1996, p. 135). To this end, he recommends that responsibility for course accreditation should shift from government to providers; government registration of providers should be enhanced by increasing the focus on quality improvement and client needs; and government should establish necessary audit procedures.

In response to criticisms of existing regulatory mechanisms such as NFROT, a new approach to training development and recognition is being implemented to facilitate the shift to a more demand-driven training market (ANTA 1997). The new National Training Framework (NTF) consists of two inter-connected features: new recognition arrangements and training packages. According to ANTA, 'the National Training Framework is designed to simplify the way training is regulated, define who is responsible for it and describe how high standards of quality can be guaranteed' (1997, p. 3).

The deregulated approach to VET promoted by the NTF has attracted some criticism. A major source of concern is that under the NTF, 'responsibility for curriculum development is being removed from the hands of educators, and the powers of course accreditation and credentialling are being delegated to employers and recognised training providers, most of whom are private for-profit providers' (Anderson 1997b). Potential problems include: fragmentation of the national training effort; a lowering of standards; loss of comparability and credibility of VET qualifications; and a dilution of controls on quality, access and consumer protection (see variously Anderson 1997a, 1997b; Chapman 1997; Peoples 1996b). Chapman argues that 'a lack of confidence in the quality of some qualifications could lead to the whole system becoming unworkable' (1997, p. 14).

As reflected in NCVER (1997), critics consider that any positive benefits of market deregulation and competition are likely to be outweighed by the negative costs in social, economic and educational terms. In order to correct market failure and to protect the public goods of educational quality, equitable access and democratic accountability, critics argue that there is a substantial role and responsibility for government regulation of the market. (Anderson 1997a, 1997b; Doughney 1992; Fooks et al. 1996; Lundberg 1994; Peoples 1996b).

Fooks et al. (1996) state that deregulation of quality controls in a training market will reduce the credibility of VET qualifications among employers, hamper the flexibility and portability of graduates, and damage the reputation of the domestic market abroad. They argue that a national quality assurance system in the training market should be established to: govern the entry and operations of training providers so as to safeguard educational quality and client interests; and determine eligibility for access to public training funds and qualifications recognition.

Anderson (1997a, 1997b) argues that a reliance on competition, market forces and client empowerment is no substitute for effective government regulation. He proposes that market reforms should be accompanied by: adequate government regulation of training inputs (i.e. teachers, facilities, financial protections) and outputs/outcomes (i.e. competency standards, course completion/graduation rates); rigorous quality audits; and severe penalties for breach of regulations. Anderson (1997b, p. 24) suggests that training markets 'will only work effectively and equitably if all parties are aware of their rights and responsibilities, and able to seek fair and just redress for valid grievances'. Consequently, he highlights the need for an independent national education and training ombudsman, supported by a mandatory code of practice for training providers and a charter of consumer rights and responsibilities.

Key policy issues

The following section examines six key policy issues which receive frequent attention in the literature. Other policy issues such as cost-shifting and substitution are discussed elsewhere in this chapter. Policy issues relating to information and intermediaries are discussed in NCVER (1997).

Clients and control over training decisions

There is considerable disagreement in the literature over the question of who are the principal clients in the Australian training market (Anderson 1996b; NCVER 1997). ACG (1994a, 1994b) argues that enterprises, rather than individual students, are the major clients in the sense that they are the 'end-users' of the outcomes of training provision (i.e. skills and competencies used for production). According to Donovan (1996) students are 'value-added' intermediaries who can be viewed both as 'buyers' and 'resellers' in the sense that they are individual consumers of training who on-sell their skills to employers. In effect, 'this model validates the view of industry as the end-client, but acknowledges the significant and fundamental role of the individual client within the training market' (Donovan 1996, p. 30).

Other commentators dispute such definitions arguing that individual students are the major client group. Ryan argues that 'overwhelmingly, the consumer in VET is the individual citizen; yet this most significant of the sector's clients is ignored by government policies purportedly fostering a "client-focussed culture"' (1995, p. 46). A report for the National TAFE Education and Student Services Standing Committee argues that students should be considered the major clients as collectively they comprise the largest group of non-government purchasers and users of VET programs and services (Anderson 1995c).

In recognition of these tensions, ANTA (1996) proposes that enterprises are the 'key clients of the training market' whereas individual students are the 'immediate clients of training providers'. It acknowledges that 'any reform will need to account for the potentially competing demands of client groups' (ANTA 1996, p. 7). NCVER concludes that 'a clear and agreed definition (of clients) is required before decisions can be made about who to empower and how best to achieve the desired outcomes' (1997, p. 7).

Underlying the ideological dispute over whether individuals or enterprises are the major clients is the fundamental question of who should decide how public resources are allocated. As noted already, one of the principal aims of developing a training market is to empower clients by shifting the locus of control over training decisions to individual consumers. Under current user-choice arrangements, however, there is a dual contradiction between the theory and practice of the training market. Government appears reluctant to cede full control to individual clients, preferring instead to retain ultimate control over resource allocation and to steer individual choices towards economic ends and industry/enterprise priorities. In the latter respect, 'much of the recent reform of the Australian VET system has adopted a classically corporatist rather than individualist approach' (Shreeve 1995, p. 138).

The OECD (1995) detects a significant shift towards 'choice' models of resource allocation, but notes that governments have been unwilling to give free rein to individual consumer preferences. 'For example, where the learning society is supported primarily for its economic benefits, there is a propensity to give "vocationally-relevant" courses privileged funding' (OECD 1995, p. 42). In addition, it notes that governments often wish to: skew public funding towards certain client groups; protect quality by placing conditions on funding; and forecast the impact on public spending. Although some degree of government control may be warranted, the OECD argues that 'governments . . . may often need to resist the urge to intervene and define too closely what kind of learning is suitable for public support' (1995, p. 42).

VET products

Much of the literature to date has assumed a natural correspondence between the training market and standard commodity markets. Selby Smith (1995) suggests that the reality is, in fact, more complex, primarily because VET has public good attributes. The OECD notes that 'unlike the commercial market, the educational product's value depends on effective collaboration between consumers and producers, and hence on a good *qualitative* match between demand and supply (1995, p. 15). Other analysts suggest that the application of the theory and language of marketing to VET devalues its educational purposes and potentially distorts the relationship between teacher and learner (e.g. Anderson 1996c; Kell 1993; Marginson 1993; Yeatman 1994).

Donovan (1996) defines VET products as job-related courses which comprise three related aspects. The *actual* product is what the customer buys or receives (i.e. knowledge, skills, certificate/diploma). For government, industry and employers, the actual product in VET is an appropriately skilled workforce. For the individual student, the actual product is the course content and the certificate of competence. The *core* product is the end goal or underlying benefit(s) sought from the product (why the customer wants the product). For industry, the core product is reflected in increased productivity and profitability; for government, it is the achievement of social and economic policy; and for the student, it is the achievement of employment and lifestyle goals. The *augmented* product includes features which make the product more attractive to the consumer and assist its consumption, for example: availability of child-care facilities, convenient location and/or job-placement services.

According to WADOT, taking account of the client's purpose and perceived outcomes of training 'will assist with determining a clear definition of the actual and the core product(s) for the sector' (1996b, p. 68). WADOT notes that the development of the marketing mix (i.e. the product itself, its price, promotion and distribution) is presently shared between State training agencies and providers. For publicly funded courses, both parties have responsibilities in regard to product, price, place, promotion and quality control. In effect, neither party has complete 'ownership' of the product. It argues that as responsibility for training delivery is increasingly devolved to providers 'it is important that decisions about the whole marketing mix are clarified' (WADOT 1996b, p. 69).

ACG (1994a) believes that the prevailing conception of VET products is both limited and distorted by current funding models which emphasise inputs rather than outputs. According to ACG, 'the current approach . . . assumes that there is a single product market—the delivery of training courses. The extent to which there is a wider market for curriculum or assessment products remains . . . untested' (1994a, p. 41). Instead of focussing on student enrolments as the basis for resource allocation, ACG proposes the development of meaningful outcome-oriented product descriptors and outcome measurements—specifically, graduate placement rates (or proxies/ indicators such as course completion rates) and customer satisfaction levels.

Fooks (1995) notes that there is a substantial difference between the training products offered by TAFE and private providers. He argues that unless there is a common standard or benchmark for defining the nature of training product, there is a risk that support services and other attributes of public TAFE provision which promote access and equity may be shed as an unintended consequence of competition.

Access and equity

As noted in the discussion of training market failure, a source of considerable concern in the literature is the potentially adverse impact of competition and market reforms on the participation of women and disadvantaged groups. Schofield (1996, p. 22) notes that 'one of the essential unresolved problems of the vocational education and training system is the relationship between social justice and the training market'. Schofield observes that current debate is characterised by a split between market and social justice advocates who work from conflicting, and seemingly irreconcilable, value systems and ideologies: one advocating the economic benefits of market competition, and the other arguing the importance of social justice over efficiency objectives.

From a social justice perspective, Schofield (1996) identifies concerns that: the social policy objectives of market reform are vague; full application of market principles into all parts of VET is unlikely to produce socially just outcomes; and few authoritative tools exist to enable the social costs and benefits of greater competition to be assessed. From a pro-market perspective, she identifies concerns that: social justice advocates represent vested interests; social justice initiatives result in excessive fragmentation of social policy and government reform; and the social justice agenda is driven by an irrational desire to protect public sector monopoly.

Schofield contends that it is possible to forge a consensus between social justice and an efficient training market by: defining clear policy objectives; developing principles to guide the application of competition policy in VET; and undertaking public benefit tests. Specific access and equity issues are discussed in the section dealing with the social impact and consequences of a competitive training market.

Community service obligations

In an effort to accommodate the non-commercial objectives of VET within a competitive market framework, some analysts employ the notion of community service obligations (CSOs). In general, CSOs refer to socially (and sometimes economically) valuable activities which have been traditionally undertaken by government enterprises but which in a competitive training market would not be viewed by such enterprises as being commercially viable, unless delivered at higher prices. Non-provision of such activities, or provision at higher prices may, in turn, result in sub-optimal investment with undesirable social and economic consequences. Examples of such activities include the delivery of training for: disadvantaged groups; small and medium-sized businesses; and people in rural or remote regions. It is commonly held that CSOs can be protected by ensuring that policy objectives are made explicit, outcomes are specified, and costings are made transparent (ACG 1994b; ANTA 1996).

Research suggests that the concept of CSOs as applied to VET is problematic. In an examination of CSOs as a funding mechanism, KPMG (1996) argues that application of the CSO concept to VET would create artificial distinctions between the social and other policy objectives of government, and between the commercial and non-commercial activities of training providers. It concludes that the concept of CSOs, originally devised in an environment where services are delivered on a predominantly commercial basis, is inappropriate for the funding and delivery of VET programs and services. Other analysts argue that the concept of CSOs is unsuitable on social and educational grounds (Burkhardt & Corben 1996; Powles & Anderson 1996). They argue that the use of CSOs effectively subordinates access and equity goals to efficiency concerns, and attenuates the traditionally broad-based and inclusive notion of social justice in TAFE/VET.

Competitive neutrality

As stated earlier, one of the pre-conditions for effective competition in a training market is competitive neutrality; that is, the existence of a level-playing field on which public and private providers can compete on equal terms. Research has identified a range of factors which public and private providers view as unfair advantages enjoyed by their competitors. Private providers consider that TAFE colleges are advantaged by: a capacity for monopoly trading; ease of access to infrastructure (staff, facilities and curriculum); economies-of-scale; a capacity to cross-subsidise commercial activities from recurrent funds; subsidised tuition fees; government recognition and marketing; and a range of historical factors. Public providers argue that private providers enjoy: greater flexibility and control of resources (particularly human resources); freedom from government interference (e.g. restrictions on fee-charging and accountability requirements); more flexible cost structures; non-reciprocal access to accredited curriculum; and freedom from community service obligations (see variously ACG 1994b; Anderson 1994; Selby Smith 1995; Selby Smith et al. 1996; WADOT 1995, 1996a; Wiltshire 1997).

Anderson (1996a) finds that recent training market reforms have largely equalised the legislative, financial and regulatory conditions under which training providers operate, with the result that few barriers remain to the establishment of competitive neutrality. According to Anderson, the major remaining impediments to competitive neutrality among public and private providers are: continuing direct government subsidisation of recurrent program provision and training infrastructure (staff, capital and equipment) in the public sector. Anderson concludes that the application of the Hilmer competition principles to these two areas would lead to an intensification of intersectoral and intrasectoral competition, and the development of parallel public and private training sectors.

Several analysts argue that establishment of competitive neutrality in accordance with the Hilmer competition principles is one of the main regulatory responsibilities of government in a competitive training market (ACG 1994b; ANTA 1996; Selby Smith 1995; Selby Smith et al. 1996; Taylor 1996). Collectively, they suggest that competitive neutrality necessitates: continuing structural reform in the public VET sector, particularly a clearer separation of the roles of government and service deliverers accompanied by increased institutional autonomy and devolution of administrative and financial responsibility to the provider level; removing barriers to market entry for private providers and restrictions on competitive conduct; developing consistent costing and pricing policies and practices in the public and private VET sectors;

facilitating 'third party' (i.e. private provider) access to publicly funded facilities including expensive and specialised facilities (e.g. libraries, student services); sharing responsibility for CSOs among public and private providers; and developing a common framework for performance reporting and financial accountability.

Research suggests that establishing competitive neutrality on a national basis is problematic. There are significant variations from one State jurisdiction to another in terms of: concepts of the training market and application of competitive funding mechanisms; and administrative and regulatory policies and practices (Selby Smith et al. 1996; Taylor 1996; WADOT 1995, 1996a). Recent attention has focussed on the need for a common-agreed protocol among States and Territories (e.g. mutual recognition arrangements) for promoting competitive neutrality on a consistent national basis. In the absence of a common approach, 'there is a danger that protected or subsidised systems, which benefit from non-transparent subsidies, may be able to compete unfairly with those systems that have exposed themselves to competition' (ANTA 1996, p. 25).

Fooks et al. (1996) argue that it is essential to ensure competitive neutrality for public TAFE providers. Otherwise, the substantial public investment in training infrastructure, together with associated public goods, will be placed at serious risk. They suggest that the training market, as presently constructed, places public TAFE providers at a major disadvantage. However, while they support government measures to equalise the conditions under which public and private providers compete, they argue that government subsidisation of private providers to facilitate market entry is an inappropriate use of public funds: 'Once the market framework is established, it becomes a matter for entrepreneurs to take a commercial decision in relation to entry or otherwise' (Fooks et al. 1996, p. 16).

Costing and pricing

Issues relating to costing, pricing and charging in the training market have been highlighted by several researchers (ACG 1994a, 1994b; Deveson 1990; Lundberg 1994; Selby Smith 1995; Selby Smith et al. 1996; WADOT 1995, 1996a). As price becomes a more important signal for consumers, and if resources are to be used efficiently, 'training providers . . . need to know the differential resource costs involved in delivering particular training services; and to reflect those costs in their pricing' (Selby Smith et al. 1996, p. 26). Research indicates that providers are generally ill-informed about the true costs of providing training at various levels, to differing groups of students, and in differing locations. Available cost estimates typically refer only to recurrent expenditures, and capital costs cannot generally be compared between alternative providers (Selby Smith et al. 1996).

Maglen and Selby Smith (1995) find that there have been few studies of costing issues such as best practice; benchmarking; elasticity of demand for different courses; variations due to enrolment size; geographical location; mode of delivery; and the costs of incorporating specific access and equity objectives. Other unresolved costing issues include: the potential conflict between costing/pricing transparency and commercial confidentiality in a competitive market environment; problems posed by historical differences among public training systems; inconsistencies between the bases used by public and private providers for cost calculation; and in relation to third party access, there are unresolved questions about terms and conditions and who sets them (ACG 1994b; Selby Smith et al. 1996; WADOT 1995, 1996a, 1996b).

Impact and consequences of competition and market reform

Market advocates argue that market-based competition will result in a range of benefits not available in a non-market VET system. The

Steering Committee for the Review of Commonwealth/State Service Provision, for instance, suggests that 'promoting competition in the delivery of VET services could generate efficiency gains and improved outcomes for clients' (SCRCSSP 1997, p.123). Based on an analysis of government-commissioned reports, NCVER (1997, p.3) summarises the benefits of a competitive training market as follows:

- greater choice and diversity for consumers
- increased quantity and quality of training provision
- more flexibility, innovation and responsiveness to client needs
- reduced wastage of government resources and lower costs for consumers
- a deeper and more dynamic national skills pool

Burke et al. state that if all the necessary pre-conditions are satisfied, 'it can be demonstrated that such markets lead to production at minimum costs with existing techniques. It will be *efficient* at least in terms of meeting the needs of buyers: with their existing patterns of purchasing power; and assuming that all benefits and costs are private ones' (1994, p. 61). In their opinion, efficient delivery of the product required is the 'major advantage' of a competitive training market.

ANTA identifies a range of benefits likely to flow from the development of a competitive training market:

> *The benefits of market reform to vocational education and training are numerous. The end users of training will have more influence over the training they receive. Business will be able to choose quality training from a diverse range of providers across Australia. Barriers will be removed to ensure that those requiring training have a closer relationship with the training provider. Training will also be better targeted and delivered more efficiently, an important consideration in the allocation of public and private funds.* (ANTA 1996, p. 1)

Although ANTA acknowledges that such benefits will be accompanied by costs, specifically, higher information and transaction costs and a more complex operating environment—'these costs will be of a short term nature and should not detract from the improved longer term viability of a competitive training market' (1996, p. 1).

Several researchers question whether a competitive training market will produce the range of benefits that advocates claim. Even if market competition produces economic benefits, they argue that it is also likely to have adverse social and educational effects. In balance, they suggest that the negative consequences of competition and market reform are likely to necessitate remedial government action (e.g. Anderson 1994; Barnett 1994; Fisher 1993; Lundberg 1994; Lundberg & Cleary 1995). Several critics argue that markets are inherently inequitable and inefficient, and that competition is reducing the quality and accessibility of VET, thereby exacerbating existing social, economic and educational disadvantage (e.g. Anderson 1995b; Fooks 1995; Kell 1993, 1995; Marginson 1993; Miller 1997; Peoples 1996a).

NCVER notes that 'at present . . . there appears to be insufficient empirical evidence either to support or refute claims that increased competition in the training market will produce a wide range of benefits not otherwise possible' (1997, p.4). This section aims to summarise existing research on the impact and consequences of competition and market reform.

One difficulty involved in evaluating the economic (and other) consequences of competition and market reforms is the lack of appropriate definitions, criteria and measurement tools. Schofield (1996) highlights the need for public benefit tests in relation to competition and market reforms. But she notes that 'we have few authoritative tools to assess the economic costs and benefits of a competitive training market and even fewer to assess social costs and benefits of greater competition' (Schofield 1996, p. 23). ACG (1994b) states that the effects of market competition may be 'partly quantifiable', particularly efficiency in the provision of standard training services. However, some will be 'impossible to quantify, particularly improved responsiveness to particular client needs, innovation, dynamism etc.' (ACG 1994b, p. 201).

Social impact and consequences

Several proponents of competition and market reform concede that there may be adverse effects on access and equity for disadvantaged groups. Selby Smith accepts that 'open and competitive processes are not always consistent with the "public interest" objective' (1995, p. 11). She acknowledges that the capacity of TAFE institutions to address equity and social justice issues may be eroded in a more competitive market. Deveson (1990) argues that the pursuit of efficiency and equity objectives are not mutually exclusive. However, he recognises the need to target special government funding on disadvantaged groups and to introduce an 'equity package' to ensure that equitable access is maintained. Similarly, ACG (1994a, 1994b) identifies a number of potentially adverse impacts on disadvantaged groups, together with the need for adequate protection.

Up-front fees have been identified as a major cause of inequitable access for women and disadvantaged groups (Anderson 1994; Anderson & Hoare 1996; Barnett 1993, 1994; Golding & Volkoff 1997; Powles 1990; Powles & Anderson 1996). Research also suggests that the increasing reliance on private providers in the context of the training market may residualise access and equity issues (Anderson 1994; Barnett & Wilson 1995).

Research on the social impact of competitive tendering is less conclusive. In a study of competitive tendering processes in the training market, WADOT (1995, 1996a) finds 'little evidence' of any adverse impacts on access and equity. It argues that tender guidelines can be designed to address the needs of special target groups. Conversely, research for the National TAFE Education and Student Services Standing Committee suggests that the quality, level and accessibility of TAFE support services for disadvantaged groups has declined as a consequence of competitive tendering (Anderson 1995c).

Research suggests that the increasing reliance on private providers in the context of the training market is residualising access and equity issues. In a comparative study of TAFE and commercial training providers, Anderson (1994) finds that private providers regard the promotion of access and equity for women and disadvantaged groups as the responsibility of public sector providers. Anderson contrasts the restricted and passive concept of access and equity employed by private providers with the open and active approach taken by TAFE colleges as reflected in their commitment to provide adequate support services such as child care, counselling and access courses. Unlike TAFE providers, private providers tend not to develop access and equity policies and are 'ill-equipped and disinclined to respond to the full range of disadvantaged student needs' (Anderson 1994, p. 201). The high levels, and selective effects, of fees are identified as the principal barrier to access in the private sector. As a result, 'increased government reliance on private providers may lead to greater inequalities in access to and the distribution of training opportunities' (Anderson 1994, p. 202).

Anderson's findings are confirmed by Barnett and Wilson (1995) in a follow-up comparative study of commercial and community providers. They conclude that in the absence of *appropriate* policy interventions by government, there will be 'a segmentation of the public and private sectors, with disadvantaged groups being able to access public training resources and not those of the private training sector' (1995, p.xiii). They suggest that there is a need to share accountability for access and equity outcomes between public and private providers; and to provide adequate resources, support and access to expertise to assist private providers to develop appropriate policies and practices.

Initial research on user choice indicates that its strong enterprise focus could marginalise access and equity considerations unless preventative steps are taken. Selby Smith et al. state that 'encouraging a commitment to access and equity by employers, employer groups and private training providers remains an important issue requiring resolution if the potential of User Choice to improve access and equity is to be achieved' (1996, p. 17).

Economic impact and consequences

The principal benefits which advocates claim will result from a competitive training market are economic, primarily greater efficiency and responsiveness to enterprise needs. Raising private investment in VET and generating an industry training culture are also identified as potential economic benefits (ACG 1994a, 1994b; ANTA 1994c; Curtain 1995; Deveson 1990; Sweet 1993, 1994).

There is currently no empirical evidence to suggest that competition and market reforms to date have increased either efficiency or responsiveness. As ACG notes:

> *The reported results of the reforms to date invite more critical analysis. Many are descriptions of activities rather than results which demonstrably contribute to stated or fundamental objectives. For example, it is not clear if the introduction of open tendering (has) improved efficiency and responsiveness.* (ACG 1994a, p. 15)

Available research suggests that competitive tendering has probably reduced the price of publicly funded training (ACG 1994a). Beyond making training places cheaper for government to purchase, no other positive economic effects can be identified on the basis of existing research. For instance, there is no clear evidence to show that competitive market processes have increased cost-efficiency or effectiveness in the utilisation of public VET resources. As WADOT notes, 'little cost/benefit analysis work has been done in relation to competitive training market processes, even in a strict cost efficiency sense' (1995, p. 25). ACG suggests that the level of transaction costs associated with competitive funding processes 'may be the most important reason for maintaining an area of non-market (public service) provision' (1994b, p. 210). The literature suggests therefore that detailed cost/benefit analyses are required to determine whether competitive funding processes are, in totality, more efficient and cost-effective than direct funding models.

ACG (1994a) finds evidence of widespread dissatisfaction among business and industry clients with the perceived lack of responsiveness, flexibility and relevance of much training provision.

In part, ACG attributes this problem to the effects of competitive tendering because it focusses on increasing 'competition between provider at the expense of . . . promoting closer links between the supply and demand sides (of the market)' (1994a, p. 28).

The extent to which competition and market reforms in VET have raised private investment and generated a training culture in industry in VET is difficult to determine on the basis of available research evidence. ABS (1996) reports that 73 per cent of commercial training providers attribute growth in their level of training activity to increased employer awareness of the importance of training. The extent to which this effect can be attributed to competition and market reform is unclear. Conversely, 38 per cent of commercial training providers reported that competition from TAFE or universities was a major contributing factor to decreased levels of training activity.

In an analysis of the changing dimensions of education and training in Australia since 1988, Burke (1995a) finds that training expenditure by both public and private sector employers has increased more rapidly than employer provision of formal training. Moreover, he finds that the proportion of total revenue derived by public VET institutions from government sources decreased from 89 per cent in 1989–90 to 86 per cent in 1993. Income from non-government sources rose by three per cent during the same period, most of which was the result of an increase in fee-for-service activity, a substantial proportion of which was funded by Commonwealth LMPs. Burke also shows that between 1989–90 and 1993, national VET revenue from fee-for-service activities increased by 158 per cent and revenue from student fees and charges grew by 44 per cent. He also identifies an above-average expansion of courses for operatives, basic employment and educational preparation, and associate diplomas. But, as Burke notes, 'it is difficult from the quantitative data to measure the extent to which the changes . . . have led to closer orientation to employer needs' (1995a, p. 40).

Developing a training culture and increasing levels of industry investment in training were two of the main objectives of the now-defunct Training Guarantee Levy. However, as Teicher (1995) notes, limited success was achieved on both fronts. In terms of industry investment in training, ACG finds that the training reforms have resulted in only 'marginal changes in the balance between public and private funding of vocational education and training' (1994a, p. 31). ACG (1994a) and Wiltshire (1997) suggest that supply-side competition and market reforms have not been successful in creating a genuine training culture in industry. Both the latter researchers highlight the need to develop demand-side strategies to raise industry investment and employer awareness of the value of training.

Research highlights several potentially negative economic consequences of competition and market reform. Dis-economies of scale may arise if TAFE colleges are subject to increasing competition from private providers. More generally, the short-term nature of training contracts awarded under existing tendering arrangements, together with the lack of guaranteed continuity of funding, may pose difficulties for training providers, particularly TAFE. The negative impact of competitive market processes on public providers is likely to be greater in rural and regional areas (see variously ACG 1994b; Anderson 1994, 1996a; Kell et al. 1997; Selby Smith et al. 1996; WADOT 1995, 1996a). Fooks (1995) argues that such trends may place the substantial public investment in TAFE infrastructure at risk.

Several researchers have identified private provider dependence on government funding as an unintended consequence of competition and market reforms (Anderson 1994; ANTA 1996; Coopers & Lybrand 1996; WADOT 1995, 1996a). Were such a trend to continue, duplication of training provision between the public and private sectors may result with a consequent reduction in the overall efficiency of resource utilisation.

Some evidence exists to show that demand-driven training provision may result in a misallocation of resources. Anderson

(1994) finds that private providers in the open or commercial market sector tend to respond to trends in individual consumer demand rather than trends in industry demand for skills. As a consequence, 'there are likely to be gaps and duplication in the provision of skills training in a market-driven system (and) a potential wastage of human talent and training resources' (Anderson 1994, p. 206).

Research suggests that competitive funding processes may result in cost-shifting and substitution of public for private training resources (Coopers & Lybrand 1996; Kronemann 1996; Selby Smith et al. 1996; WADOT 1995, 1996a). If a significant shift in the public and private balance of economic costs/benefits was to occur, 'the traditional arguments about the proportion of training costs to be borne publicly need to be critically re-examined' (Selby Smith et al. 1996, p. 11). Other research suggests that the prevention and detection of cost shifting and substitution in a training market is problematic (Ryan 1995; WADOT 1995, 1996a). ANTA argues that 'cost shifting is a distraction from the real issue of the importance for government to clearly define what it will fund and the further separate issue of what provider is best placed to carry out the training' (1996, p. 15).

Coopers and Lybrand (1996) reach mixed conclusions about the economic impact of user choice. On the one hand, they suggest that user choice may lead to greater efficiency in the utilisation of human and financial resources in both firms and the public training system. On the other hand, they identify several potential problems including: underutilisation of public training resources; unnecessary duplication; and a commitment of resources to marketing and competition rather than educational development and delivery. The economic consequence for the taxpayer would be 'inefficient use of public funds' (Coopers & Lybrand 1996, p. 58). ANTA notes that 'consideration will have to be given to balancing the potential costs of an underutilised TAFE system with the potential gains from greater efficiency in a more diverse market' (1996, p. 22).

Educational impact and consequences

The precise impact of competition and market reforms on the nature and quality of VET provision is difficult to assess on the basis of existing research. Market advocates hold that 'high cost or inefficient training providers will lose out through competition to those trainers providing a better quality or more efficient service' (Deveson 1990, p. 9). But, as Fooks (1995) points out, there is a lack of empirical evidence to support such claims. Moreover, perceptions of quality are highly subjective and there are currently no agreed definitions or criteria for measuring and comparing quality in a consistent and meaningful way over time or among providers (ACG 1994b; Anderson 1994).

Most concern has focussed on the effects of competitive tendering on educational quality (ACG 1994b; Carmichael 1992; Fooks 1995; Yeatman 1994). ACG notes that 'the extensive experience in other sectors with competitive tendering and contracting out points to some problems which can occur in any sector—e.g. problems in protecting service quality' (1994b, p. 200). Some evidence exists to show that intensive price competition under competitive tendering forces providers to cut costs by reducing resource-intensive educational support services (Anderson 1994, 1995c; Kell et al. 1996; Kell et al. 1997).

Other research suggests that competitive tendering may enhance quality, provided that tender-design processes and selection criteria place equal emphasis on price and quality (CESAC 1992; WADOT 1995, 1996a). WADOT finds 'no evidence' that quality has been undermined by competitive tendering processes, but notes that 'good comparative data is lacking to enable any real assessment of the impact of those processes on the quality of training' (1995, p. 22). Several researchers identify the need for further investigation of the impact of competitive tendering on educational quality (ACG 1994b; Anderson 1994; Lundberg 1994).

Research shows that competition and market reforms are changing the structure, composition and balance of the publicly funded and recognised VET sector (Anderson 1996a). Specifically, the number of publicly recognised private providers has increased steadily since the introduction of NFROT. Conversely, there has been a reduction in the number of public TAFE providers as a consequence of amalgamations. Overall, Anderson (1996a) concludes that greater numerical flexibility in the national VET system has increased provider diversity and client choice, except in the non-services sector and in non-metropolitan areas.

The extent to which the increase in the number of publicly recognised providers has contributed to greater diversity in the type and quality of training (as distinct from providers) is unclear. Preliminary research suggests that the introduction of nationally consistent competency standards as bench-marks for course development and accreditation may be contributing to an increasing homogenisation of training provision (ACG 1994b; Anderson 1994).

There is a growing body of evidence to suggest that competition and market reforms are altering the educational profile of TAFE providers. Several researchers find that TAFE is shedding high-cost programs regardless of their social or economic value, and diverting resources from traditional educational activities to business development and marketing (see variously Anderson 1994; Brown et al. 1996; Hammond 1992; Kell et al. 1996; Miller 1997). However, research on TAFE managers' perceptions of the impact of training reforms suggests that the positive effects of competition and market reforms on quality may outweigh the negative effects (Lundberg 1996). Around 12 per cent of survey respondents reported that competition and a greater client focus has had a positive influence on quality. By comparison, around six per cent identified tendering and user pays/competitive funding as negative influences on quality.

Political impact and consequences

Market reforms may have unintended and contradictory political consequences. As noted already, considerable emphasis is placed by market advocates on the need to strengthen accountability by devolving responsibility for outcomes to service providers. One consequence is that governments themselves can no longer be directly held to account for the financial and educational performance of sub-contracted providers (Anderson 1995b; Kell 1995).

Transparency of costs and funding processes is frequently highlighted as a pre-condition for effective market competition. Yet, the conduct of competitive funding processes on a 'commercial-in-confidence' basis obscures the processes and criteria employed by government departments to allocate public resources. For the same reason, expenditure of government funds by sub-contracted providers is shielded from public scrutiny. In effect, the principles underlying competition and market reforms may result in a loss of democratic accountability (Anderson 1995b; Ryan 1995). On this account, ANTA notes that 'as more registered private providers gain access to public recurrent funds, appropriate accountability mechanisms will need to be established to ensure that agreed results are achieved with public funds' (1996, p. 17).

Among the main effects of competition and market reforms in VET, to date, has been a diversification of the financial sources of public TAFE providers and an atomisation of the organisational structure of the TAFE system (Anderson 1994; Brown et al. 1996; Kell 1993). Competition reforms are likely to increase the degree of financial and institutional autonomy enjoyed by public training providers with a corresponding loss of control by government over their policy and resource priorities. In consequence, competition and market reforms may reduce the capacity of governments to promote public policy objectives and implement reform in an integrated manner across different spheres of social and economic life (Anderson 1994; Marginson 1993).

Overview of impacts and consequences

Due to the relative novelty of competition and market reforms, together with the lack of comprehensive data and research on their effects, it is premature to reach definitive conclusions about their potential impact and consequences. However, it is clear that the economic benefits of competition and market reforms in the VET sector are yet to be substantiated.

Moreover, available research and data suggest that they may be outweighed by adverse social, economic, educational and political consequences. Before a final verdict can be delivered either way, there is a need for further investigation of the impact and consequences of the full range of competition and market reforms in the VET sector.

As one example, WADOT (1996a) acknowledges that competitive tendering processes have both 'beneficial' and 'detrimental' consequences. However, it also notes that 'the implications of competitive tendering of VET for providers, industry and students are still far from being fully identified and understood' (WADOT 1996a, p. 46). The same observation applies to other competition and market reforms in the VET sector.

Findings and directions for further research

The development of a competitive training market entails a fundamental and comprehensive redesign of institutional structures, cultures and practices in the Australian VET sector. Substantial changes have already been made to financial and delivery arrangements for VET since the training market concept was first endorsed in 1990 by Commonwealth, State and Territory governments. Most of the early reforms focussed on changes to the supply side of the training market. Efforts were directed primarily at increasing competition among providers through competitive funding mechanisms controlled by government. Current proposals have shifted the focus of competition and market reform to the demand side of the training market. Now, the main objective is to enhance provider responsiveness by empowering clients to make training decisions. Each of these different strategies has major implications for the roles, responsibilities and relationships of key stakeholders, in particular for the role of government with respect to funding and regulation.

As reflected in this chapter, the nature, impact and consequences of competition and market reform have engendered considerable debate among policy-makers, researchers and affected parties in the VET sector. The co-existence of, and tensions between, competing perspectives does not negate the possibility of reconciliation. Sufficient common ground exists to enable agreement to be reached over how a training market could be most effectively funded and regulated, and about the nature and degree of competition and co-operation that should prevail. As Schofield notes, 'there are some values which most in the VET business would share (and) there is more common ground between social justice and an efficient training market than current debate allows' (1996, pp. 22, 23). For instance, there is little dispute over the fundamental importance of VET in social and economic terms, or the need to share the costs and benefits of competition and market reform in an efficient and equitable manner.

The challenge confronting the VET sector, at present, is to define this common ground and engage in open and constructive debate about the most effective way forward. This, in turn, requires that consensus be reached about: the policy objectives of a competitive training market; the roles and responsibilities of public and private stakeholders; and the rules and expectations which should govern the behaviour of participants at all levels. Differences of opinion will always remain. But provided that all parties have an opportunity to contribute to the debate, the prospect of achieving broad agreement over policy priorities and directions will be maximised.

Of equal importance is the need to ensure that the nature, impact and consequences of competition and training market reform are fully understood. Choices and decisions about strategies for the development of a competitive training market need to be well-informed. The formulation of policy options and strategies should be based, as far as practicable, on empirical evidence rather than on ungrounded claims and counterclaims about possible advantages and disadvantages.

Although there is a growing body of research on competition and market reform in the VET sector, the knowledge and information bases remain limited in key respects. Conceptual frameworks and data for analysing the size, structure and composition of the training market require further development. Additional research is required on the extent to which current market conditions satisfy the preconditions for an effective training market, specifically in relation to: the structure and composition of the supply and demand sides of the market; the nature of VET products; and the information requirements of clients and providers. More research is required on the efficiency and cost-effectiveness of the various models for competition and market reform, and their relative appropriateness for different market sectors.

Most importantly, there is a need to develop a better understanding of the costs and benefits of competition and market reforms. Such research would provide a more effective basis for determining the appropriate division of funding responsibility among key stakeholders, and for developing effective models of regulation. Finally, a comprehensive evaluation of the impact of competition and market reforms to date should be undertaken. Without such knowledge, it will remain difficult to identify the social, economic, educational and political consequences, both intended and unintended, of competition and market reform in the Australian VET sector.

References

ABS (Australian Bureau of Statistics) 1996, *Commercial training providers Australia, 1994*, catalogue no. 6352.0, AGPS, Canberra.

ACG (Allen Consulting Group) 1994a, *Successful reform: Competitive skills for Australians and Australian enterprises*, Australian National Training Authority, Brisbane.

—— —— 1994b, *Establishing an effective Australian training market*, Office of Training and Further Education, Melbourne.

ACPET (Australian Council for Private Education and Training) 1995, submission to the Inquiry into the Australian National Training Authority, in Senate Employment, Education and Training References Committee *Inquiry into the Australian National Training Authority (ANTA) submissions*, no. 6(a), SEETRC, Canberra.

ACTU/TDC (Australian Council of Trade Unions/Trade Development Council) 1987, *Australia reconstructed: A report by mission members*, AGPS, Canberra.

Anderson, D 1994, *Blurring the boundaries: TAFE and commercial colleges in the open training market*, National Centre for Vocational Education Research, Adelaide.

—— —— 1995a, 'Private training provision in Australia: An overview of recent research', in *The economics of education and training 1995*, eds F Ferrier & C Selby Smith, Australian Government Publishing Service, Canberra, pp. 1–14.

—— —— 1995b, 'For profit or not for profit? The national training reform agenda and its implications for post-compulsory education and training', in *Selling our future? Private sector involvement in public education*, selected proceedings of a Public Sector Research Centre/Australian Education Union seminar, Melbourne, pp. 20–36.

—— —— 1995c, *Are you being served? Client perspectives on student services and amenities in TAFE*, Education and Student Services Standing Committee, Melbourne.

—— —— 1996a, 'The training market reforms and their impact on the vocational education and training system', in *The economic impact of vocational education and training*, eds F Ferrier & C Selby Smith, AGPS, Canberra.

—— —— 1996b, *Reading the market: A review of literature on the vocational education and training market in Australia*, Monash University-ACER Centre for the Economics of Education and Training.

—— —— 1996c, 'TAFE: Enterprising or educating?', *Australian TAFE Teacher*, vol. 30, no. 2, pp. 35–37.

—— —— 1997a, 'Going into bat for an umpire', in *Campus Review*, vol. 7, no. 4, p. 8.

—— —— 1997b 'Salmonella in the smorgasbord', *Australian TAFE Teacher*, vol. 31, no. 3, pp. 22–24.

——— ——— & Hoare, H 1996, 'Participating in VET: Breaking down the barriers', an unpublished national report for the Commonwealth Department of Employment, Education and Training.

ANTA (Australian National Training Authority) 1994a, *Proposals for more effective implementation of training reform*, ANTA, Brisbane.

——— ——— 1994b, *User choice: Discussion paper*, Office of Training and Further Education, Melbourne.

——— ——— 1994c, *Towards a skilled Australia: A national strategy for vocational education and training*, ANTA, Brisbane.

——— ——— 1996, *Developing the training market of the future*, a consultation paper, ANTA, Brisbane.

——— ——— 1997, *Assuring quality and choice in national training: Australia's National Training Framework*, ANTA, Brisbane.

Barnett, K 1993, *Swings and roundabouts: The open training market and women's participation in TAFE*, discussion paper, National Centre for Vocational Education Research, Adelaide.

——— ——— 1994, *Some can, some can't: The impact of fees and charges on disadvantaged groups in TAFE*, discussion paper, National Centre for Vocational Education Research, Adelaide.

——— ——— & Wilson, S 1995, *Separate responsibilities: A comparative, equity-focussed study of commercial and community training providers*, AGPS, Canberra.

Blackmore, J 1991, 'Education in the marketplace', *Education Links*, no. 41, pp. 22–25.

Borland, J 1990, 'Worker training', *Australian Economic Review*, 4th quarter, pp. 74–80.

Brown, L, Seddon, T, Angus, L & Rushbrook, P 1996, 'Professional practice in education in an era of contractualism: Possibilities, problems and paradoxes', *Australian Journal of Education*, vol. 40, no. 3, pp. 311–327.

Burke, G 1995a, 'Dimensions of education and training: Australia from 1988', in National Board of Employment, Education and Training *Demand for and dimensions of education and training*, commissioned report no. 39, AGPS, Canberra.

——— ——— 1995b, 'Some aspects of the economic evaluation of vocational education and training', in *The economics of education and training*, AGPS, Canberra, pp. 35–43.

——— ——— McKenzie, P, Maglen, L, Selby Smith, C, Ferrier, F & Selby Smith, J 1994, *The economics of vocational education and training in Australia: A review of recent literature*, occasional paper 94/2, Australian National Training Authority, Brisbane.

——— ——— McKenzie, P & Grauze, A 1996, *Review of statistical data for research on vocational education and training*, Monash University-ACER Centre for the Economics of Education and Training.

Burkhardt, J & Corben, J 1996, 'Balancing economic and social justice perspectives: A TAFE view', in *Training Agenda*, vol. 4, no. 3, pp. 24–25.

Carmichael, L (chair), Employment and Skills Formation Council 1992, *The Australian Vocational Certificate Training System*, National Board of Employment, Education and Training, Canberra.

CESAC (Commonwealth Employment Service Advisory Committee) 1992, *Review of tendering for labour market programs*, AGPS, Canberra.

Chapman, G 1997, 'The National Training Framework: A provider perspective', in *Training Agenda: A Journal of Vocational Education and Training*, vol. 5, no. 2, pp. 13–14.

Chapman, B & Stemp, P 1992, 'Government intervention in the provision of on-the-job training', in *Australian Economic Papers*, vol. 31, no. 59, pp. 354–68.

Coopers & Lybrand 1994, *The impact of youth credits on the training market*, Employment Department, United Kingdom.

—— —— 1996, *The exercise of user choice in vocational education and training: Final report*, State Training Board of Victoria, Melbourne.

Curtain, R 1995, 'Employers and access to publicly funded training', in *The Australian Economic Review*, 2nd quarter, pp. 93–100.

Dawkins, J 1988, *Industry training in Australia: The need for change*, AGPS, Canberra.

—— —— 1989, *Improving Australia's training system*, AGPS, Canberra.

—— —— & Holding, A 1987, *Skills for Australia*, AGPS, Canberra.

DEETYA (Department of Employment, Education, Training and Youth Affairs) 1996, *Working nation: Evaluation of the employment, education and training elements*, EMB report 2/96.

Deveson, I (chair) 1990, *Training costs of award restructuring*, 2 volumes, (Deveson report), Australian Government Publishing Service, Canberra.

Donovan, R 1996, 'A commentary on marketing and market segmentation in the VET sector', in Western Australian Department of Training *Mapping the training market: Segmenting the market for individuals*, WADOT, Perth, pp. 13–32.

Doughney, J 1992, 'Private commercial vocational training in Victoria—a case for tighter regulation', *Job Watch Working Papers*, no. 92/1.

ESFC (Employment and Skills Formation Council) 1989, *Industry training in Australia: The need for change*, interim report on consultations by the Employment and Skills Formation Council, AGPS, Canberra.

—— —— 1991, *TAFE in the 1990s: Developing Australia's skills*, AGPS, Canberra.

Finn, B (chair) 1991, *Young people's participation in post-compulsory education and training*, report of the Australian Education Council Review Committee, Australian Government Publishing Service, Canberra.

Fisher, N 1993, 'Developing a national training market: Is it a sensible strategy?', in *Unicorn*, vol. 19, no. 4, November 1993, pp. 27–33.

FitzGerald, V 1994, 'The rationale for government's role in vocational education and training', in *Research Priorities in Vocational Education and Training: A Discussion*, Australian National Training Authority National Research Advisory Council conference, Sydney, 20-22 April, National Centre for Vocational Education Research, Adelaide, pp. 208–228.

Fooks, D 1995, 'User choice: The new orthodoxy in vocational education and training, a commentary on initiatives to stimulate an open training market for vocational education and training', unpublished monograph, Canberra Institute of Technology, Canberra.

—— —— Ryan, R & Schofield, K 1996, *Making TAFE competitive: Creating an efficient and productive network of publicly funded providers that can compete effectively in the training market*, Australian College of Education, Canberra.

Foyster, J 1997, 'How supply and demand forces shape VET markets—an interim report', paper presented to Different Drums—One Beat? Economic and Social Goals in Education and Training conference, Monash University-ACER Centre for the Economics of Education and Training and National Centre for Vocational Education Research, March 20–21, Mt Evelyn, Victoria.

Golding, B & Volkoff, V 1997, 'Participation in VET in Australia: Different drives, same needs?', paper presented to Different Drums—One Beat? Economic and Social Goals in Education and Training conference, Monash University-ACER Centre for the Economics of Education and Training and National Centre for Vocational Education Research, March 20-21, Mt Evelyn, Victoria.

Gonczi, A 1996, 'Recent reform in initial vocational education and training: Prospects and problems', paper presented at Researching and Learning Together, Australian National Training Authority Council's third annual conference, Melbourne, 31 October–1 November.

Hammond, B 1992, 'Business development activities in technical and further education: The changing face of tertiary education', in *The economics of education 1992*, eds G Burke et al., Centre for the Economics of Education and Training, Monash University, Australian Government Publishing Service, Canberra, pp. 123–133.

Harmsworth, P 1996, 'Implementation of national competition policy', executive memo 96/117, Office of Training and Further Education, Victoria, 19 July.

Hawke, G & Sweet, R 1983, *Some issues in access and selection*, TAFE National Centre for Research and Development, Adelaide.

Hilmer, F (chair) 1993, *National competition policy: Report by the independent committee of inquiry*, AGPS, Canberra.

Kangan, M (chair) 1974, *TAFE in Australia: Report on needs in technical and further education*, CTEC, Canberra.

Kell, P 1993, 'Managerialism and market forces in vocational education: "Balkanising" education in the "Banana Republic"', in *A socially critical view of the self managing school*, J Smyth, Falmer Press, Lewes, pp. 213–38.

—— —— 1995, 'The bargain bidding State: Outsourcing vocational education and training', paper presented to The Idea of Productive Diversity Seminar, James Cook University, Townsville.

—— —— Balatti, J & Hill, A 1996,' Impact of the open training market on Queensland TAFE at the institutional level', unpublished research project report, Barrier Reef Institute of TAFE, TAFE Queensland.

—— —— Balatti, J & Muspratt, S 1997, 'The private, public and open training markets: A study of private training providers in regional north Queensland', in *Australian Educational Researcher*.

Kenway, J, Bigum, C, Fitzclarence, L, & Collier, J 1993, 'Marketing education in the 1990s: An introductory essay', in *Australian Universities' Review*, vol. 36, no. 2, pp. 2–6.

KPMG Management Consulting Pty Ltd 1996, *Community service obligations as a funding mechanism for the emerging training market*, STBV, Melbourne.

Kronemann, M 1996, *The funding of vocational education and training: Research report*, Australian Education Union, Melbourne.

Lundberg, D 1994, *Calling the tune: Market responsive vocational education, a discussion paper*, National Centre for Vocational Education Research, Adelaide.

—— —— 1996, *Steering through the rapids: The impact of the training reform agenda on TAFE managers*, National Centre for Vocational Education Research, Adelaide.

—— —— & Cleary, M 1995, *Organising a fair go: Fair participation in vocational education and training and the Victorian Negotiated Targets Strategy*, NCVER, Adelaide.

Maglen, L R 1990, 'Challenging the human capital orthodoxy: The education-productivity link re-examined', *Economic Record*, 66, pp. 281-294.

—— —— 1993, 'Assessing the economic value of educational expansion: A preliminary review of the issues, arguments and evidence', in *Education Issues*, EPAC background paper no. 27, AGPS, Canberra.

—— —— McKenzie, P, Burke, G & McGaw, B 1994, 'Investing in education and training', in *Investing in Australia's future: Achieving the Australian 2010 vision*, ed. T Larkin, Business Council of Australia, Melbourne, pp. 149-187.

——— & Selby Smith, C 1995, *Pricing options in NSW TAFE*, working paper no. 1, Centre for the Economics of Education and Training, Monash University.

Marginson, S 1993, *Education and public policy in Australia*, Cambridge University Press, Melbourne.

Martin, L 1995, 'The role of the private provider in a national system of vocational education and training', paper presented at Towards a Skilled Australia: National Vocational Education and Training conference, in conference proceedings, February, Australian National Training Authority, pp. 179–183.

Miller, R 1997, 'Corporatising TAFE: Educational factories and "dole bludgers"', in *Education Links*.

MOVEET (Ministers of Vocational Education, Employment and Training) 1992, *Common and agreed national goals for vocational education and training in Australia*, MOVEET Secretariat, Canberra.

NBEET (National Board of Employment, Education and Training) 1992, *Fitting the need*, AGPS, Canberra.

——— 1996, *The good, the bad, the everything in-between: The quality and relevance of Working Nation training*, AGPS, Canberra.

NCVER (National Centre for Vocational Education Research) 1997, *Developing the training market of the future: A review of research literature*, prepared as a submission to the Australian National Training Authority, NCVER, Adelaide.

OECD (Organisation for Economic Co-operation and Development) 1995, *Learning beyond schooling: New forms of supply and new demands*, OECD, Paris.

Peoples, K 1996a, 'TAFE under siege', in *Education Australia*, issue 34, pp. 10–13.

——— 1996b, 'The second wave', in *Australian TAFE Teacher*, vol. 30, no. 3, pp. 6–7.

Powles, M 1990, 'Access and equity implications of fees in TAFE', in *Training costs of award restructuring*, vol. 2, supporting papers (Deveson report), chair, I Deveson, Australian Government Publishing Service, Canberra, pp. 81–150.

——— & Anderson, D 1996, 'Participation and access in TAFE: Social service or economic utility?', in *Australian and New Zealand Journal of Vocational Education Research*, vol. 4, no. 1, pp. 97–129.

Ryan, R 1995, *The market for training: Policy discussion paper*, National Centre for Vocational Education Research, Adelaide.

Schofield, K 1996, 'Taking care of business: Social justice and the training market', in *Training Agenda*, vol. 4, no. 3, pp. 22–23.

Scott, B 1989, *TAFE restructured: Building a dynamic vocational education and training enterprise for the 1990s*, management review, NSW Education Portfolio, Sydney.

SCRCSSP (Steering Committee for the Review of Commonwealth/State Service Provision) 1997, *Report on government service provision*, vol. 1, SCRCSSP, Canberra.

Selby Smith, J 1995, *The national competition policy review (the Hilmer report) and its implications for the vocational education and training system*, Australian National Training Authority, n.p.

—— —— Selby Smith, C & Ferrier, F 1996, *Implementing user choice: Policy issues*, a report to ANTA, Joy Selby Smith Pty Ltd, Melbourne.

Shreeve, R 1995, 'User choice and the training market', paper presented at Towards a Skilled Australia: National Vocational Education & Training conference, in conference proceedings, February, Australian National Training Authority, pp. 133–142.

Sloan, J 1994a, *The market for training in Australia*, working paper series, no. 131, June, National Institute of Labour Studies Inc., Flinders University, Adelaide.

—— —— 1994b, 'Research into the costs and benefits of vocational education and training', in *Research priorities in vocational education and training: A discussion*, Australian National Training Authority National Research Advisory Council conference, Sydney, 20–22 April, National Centre for Vocational Education Research, Adelaide, pp. 129–167.

Sweet, R 1990, 'Initial vocational preparation: Facts and issues; costs and benefits', in *Training costs of award restructuring*, vol. 2, supporting papers (Deveson report) chair, I Deveson, AGPS, Canberra, pp. 221–252.

—— —— 1993, *A client-focussed vocational education and training system?*, Dusseldorp Skills Forum, November.

—— —— 1994, 'Meeting clients' needs: Planning or market models of resource allocation?', in *Planning for tomorrow in vocational education and training, national conference*, conference papers, NSW Board of Vocational Education and Training, 25–26 July, Gazebo Hotel, Sydney, pp. 30–36.

Taylor, R, (chair), 1996, *Report of the review of the ANTA agreement*, AGPS, Canberra.

Teicher, J 1995, 'The training guarantee: A good idea gone wrong', in *The economics of education and training 1995*, eds F Ferrier & C Selby Smith, AGPS, Canberra, pp. 105–112.

VEETAC (Vocational Education, Employment and Training Advisory Committee) 1991, *National Framework for the Recognition of Training: Report of the VEETAC Working Party on Recognition of Training*, VEETAC.

Venning, P 1993, *Education and training market in South Australia*, research series report no.1, DETAFE, Adelaide.

WADOT (Western Australian Department of Training) 1995, *Developing the training market*, 2 volumes, April, WADOT/ANTA, Perth.

—— —— 1996a, *Developing the training market: Issues and best practices arising from State/Territory pilot activities*, January, WADOT/ANTA, Perth.

—— —— 1996b, *Mapping the training market: Segmenting the market for individuals*, WADOT, Perth.

Ward, B J 1993, *The size of the education and training market in South Australia*, research series report no. 2, DETAFE, Adelaide.

Wiltshire, K 1997, *Factors affecting the training market in Queensland*, The University of Queensland, Brisbane.

Yeatman, A 1994, 'Who costs, who benefits?', *Research priorities in vocational education and training: A discussion*, Australian National Training Authority National Research Advisory Council conference, Sydney, 20–22 April, National Centre for Vocational Education Research, Adelaide, pp. 115–128.

6 Entry-level training*

David Lundberg

Context

ENTRY-LEVEL TRAINING is directed to provide appropriate training for people who are entering the workforce at a variety of occupational levels, but the term is usually understood to refer to training for occupations up to Australian Standards Framework (ASF) level 4, or the equivalent of advanced trades qualifications. For many of these occupational categories, entry-level training commonly involves substantial components of work-based training as well as formal institutional training (often organised in apprenticeships or traineeships). Entry-level training above the ASF level 4 classification usually involves greater emphasis on formal education and training at TAFE or university and less reliance on work-based training.

Technical and Further Education (TAFE) resulted from a reform of technical and vocational education and training in the 1970s (Kangan 1975). TAFE courses, apprenticeships and traineeships have been the main forms of entry-level training in Australia (Goozee 1993). Major reforms were initiated in 1992 towards a new

---

* This chapter is a reprint of Lundberg, D 1997, *Entry-level training*, Review of research, National Centre for Vocational Education Research, Adelaide.

Australian Vocational Training System (AVTS), modified since 1996 by the proposed system of New Apprenticeships, which includes apprentices and trainees. Concurrently with these changes, more entry-level vocational education and training is being provided in post-compulsory schooling and by private providers.

Post-compulsory education and training

Entry-level training needs to be seen in the context of post-compulsory education and training. Until the 1980s, Australia had relatively low levels of retention to Year 12 and low rates of participation in other forms of post-compulsory education and training except for apprenticeships in the manufacturing industry which were at internationally comparable levels (Finn 1991). The Australian Traineeship System was established to rectify a severe gender imbalance, restricted occupational coverage and inflexibility in the apprenticeship system (Kirby 1985; DEET 1991c). Before the Australian Traineeship System was introduced, Australia was second lowest (ahead of Greece) among Organisation for Economic Co-operation and Development (OECD) countries in the proportion of its young people who had access to vocational education and training leading to recognised qualifications (Sweet 1995).

Between 1983 and 1993 there was a significant improvement in apparent retention to Year 12 in Australian schools which led to significant increases in demand for places in tertiary education, particularly in universities. In 1991, the Finn committee recommended three targets for higher levels of participation by young Australians in post-compulsory education, summarised as '95 per cent of 19-year-olds should have completed Year 12 or an initial post-school qualification or be participating in education and training' by 2001. These targets represented a significantly higher level of participation in vocational education and training, particularly in structured entry-level training (Finn 1991).

Data on participation in the labour market and education or training during the first five years after compulsory schooling were developed for 1988–89 for the Finn report. The Australian Youth Survey and the Youth in Transition data-bases provide useful insights into employment, education and training pathways (Long & Robinson 1995). Some work is already beginning in this area, but development of survey data sets for the age cohort at fixed intervals, building towards annual collections, might permit some substantial improvements in policy-relevant information.

Since 1993, there has been a steady decline in apparent retention to Year 12, which has made attainment of the Finn committee's participation targets more difficult to achieve by 2001. The reasons for this change in participation rates have not been reliably established by systematic research. Among other measures, attention may need to be directed to measures to assist students' transition from compulsory schooling into post-compulsory education and training pathways, like the Western Australian 'WAVE' program (Lloyd 1992).

The significance of not attaining the Finn targets by 2001, or even the continuing relevance of those targets, may be seen as either economics or faith. The Department of Employment, Education and Training (DEET) prepared a projection study with several alternative scenarios to 2001, to illustrate alternative futures (DEET 1991b; Cullen 1993). There are difficulties in demonstrating the economics of vocational education and training, comparable with those of establishing the benefits of research or technological change (Clare & Johnston 1993). The data on the marginal employment status of people without post-compulsory qualifications is clear, and that implies a need for individuals to take such targets very seriously. However, when the enterprise perspective is considered, the evidence for the necessity of such participation targets is not strong. International industry 'peer pressure' implies a need to invest in education and training (ESFC 1992, 1993, 1994; OECD 1993; ABS 1994; Stern 1994; cf Green & Steedman 1993), but even recognised skill gaps in competitive situations do not necessarily induce managers to adopt a training policy (Smith 1995). The difficulties of demonstrating the economics of vocational education and training tend to increase motivational challenges in relation to employer and apprentice/trainee investment in education and training (see below).

In the 1990s, Australia is still second to lowest among OECD countries in terms of vocational education and training opportunities for young Australians. Three quarters of post-compulsory education for students in upper secondary age cohorts is in general education, and participation in apprenticeships is declining, as a proportion of the workforce and in the average previous educational attainments of apprentices compared with similar occupational categories (Sweet 1995).

The imbalance between general and vocational educational opportunities was one of the issues which the Finn committee addressed. It remains a major concern.

Industrial relations, income formation and training

The Finn report supported the development of improved entry-level vocational education and training (Finn 1991), which had been actively explored by federal/State advisory bodies (COSTAC 1990a, 1990b; DEET 1991a), several major interest groups (ACTU/TDC 1987; CAI 1987, 1991; BCA 1990a, 1990b) and others (Beare & Millikan 1988). A proposal for a new competency-based entry-level training system had been developed, in a framework which highlighted the relationships between entry-level training, industrial relations and income formation (Australian House of Representatives Standing Committee 1989a, 1989b; DEET 1991a). The process of award restructuring was seen as requiring a new commitment to training (DEET 1989a, 1989b; Deveson 1990).

Some of the most contentious issues in the reforms of entry-level training have concerned the relationships between entry-level training, industrial relations and income formation. The issues in dispute included whether trainee and apprenticeship wages should be set on an age or competence-related basis. Where competence was accepted, issues of the relationship between competence and experience, that tended to be age-related in practice, became important. The issues of incentives or dis-incentives for employers and trainees or apprentices affecting their propensity to participate in entry-level training schemes were closely bound up with industrial relations. In particular, there was initial widespread confusion about whether or not there was, or was likely to become, a relationship between market rates for particular occupations and the competency levels required in those occupations, with reference to the Australian Standards Framework. Controversy on this point considerably confused the initial processes of introducing competency-based entry-level training.

The issue of youth wages, and the relationship such arrangements might have with availability of training places, particularly in work-based entry-level training, has been a point of continuing controversy. Australia's training wages for apprentices and trainees are a substantially higher proportion of the full adult wage rate than is the case in Western European countries, such as Germany, where the rate of participation in such work-based training arrangements is much higher than Australia in non-manufacturing occupations (Sweet 1995).

In the area of the relationships between industrial relations and entry-level training, research has largely been restricted to modelling alternative options, the formulation of which has been driven by industrial relations practitioners and policy-makers (e.g. DEET 1991a).

Systemic changes in entry-level training

Starting from the Finn report and previous federal-State policy work (DEET 1991a), the Employment and Skills Formation Council (ESFC) consulted extensively and developed a framework for a new Australian Vocational Certificate Training System (Carmichael 1992), the name of which was later simplified to an Australian Vocational Training System (AVTS).

It could be said that the genesis of the Australian Vocational Training System involved more consultations than formal research, but the consultations drew on a substantial breadth of practical experience. This included detailed involvement by Commonwealth, State and Territory departments and agencies in the development of the DEET plan that was considered in the consultation process. The ESFC consultations included 180 written submissions and meetings with over 400 organisations in all States and Territories (Carmichael 1992). The ESFC report was then the focus of further consultations with key stakeholders, conducted by an Australian Education Council/Vocational Education, Employment and Training Advisory Committee (AEC-VEETAC) working party. A parliamentary committee endorsed similar principles (Australian House of Representatives Standing Committee 1991). Aspects of the AVTS system were tested in pilot projects and evaluated (O'Sullivan et al. 1994; Rumsey 1994), before and after Commonwealth, State and Territory ministers jointly agreed to proceed with the implementation of the AVTS program from January 1995 to January 1997.

The AVTS scheme envisaged the introduction of a comprehensive program of competency-based entry-level training for virtually all people who did not choose to go to university or to take higher-level technician training (ESFC 1993). Delivery would be by local networks, linking schools, TAFE, industry, and private providers. The intention was to provide a system which could realise the Finn targets for participation by 2001. Key competencies were to be developed in all of the pathways, and each pathway in the system was to articulate fully with the others.

Group training companies were accorded a significant role as brokers in the AVTS (Carmichael 1992). This was confirmed in the *Working nation* white paper (Keating 1994) which accorded to the AVTS a key role in the government's response to unemployment. The white paper added two new mechanisms: a national 'industry-driven' body called the Australian Student Traineeship Foundation to assist school-industry networking and a National Employment and Training Taskforce (NETTFORCE) to promote industry involvement in training. A review of the training reform agenda by the Allen Consulting Group (1994a) found substantial industry support for the AVTS, and another by the Australian National Training Authority (ANTA 1994b, pp.24–26) endorsed the AVTS system, suggesting clearer definitions of the roles of key stakeholders in the system.

Equitable access and participation were high priorities of the AVTS (Carmichael 1992). The former federal government's use of the AVTS as part of its response to unemployment reinforced support for the AVTS (Keating 1992, 1994). The relationship between labour market programs and the 'mainstream' vocational education and training provision has always been complex (Bush 1992). The Australian Council of Social Service (ACOSS) has contributed to the development of proposals for improved linkages between labour market programs and 'mainstream' vocational education and training (Green 1996). The negotiated targets scheme that operated in Victorian TAFE until recently also assisted many people to make this transition. Similar programs could be administered through the National Management Information System Standard (NATMISS) using the Australian National Training Authority (ANTA) reporting arrangements (Lundberg & Cleary 1995), but this may not be consistent with the policy approach of the present federal government.

Progress in the implementation of the AVTS was slow (Allen Consulting Group 1994a; ANTA 1994b). Closer cross-sectoral co-operation between school and TAFE envisaged in the AVTS involved numerous problems. These included:

- different federal-State and sectoral funding arrangements for schools and TAFE
- industrial relations difficulties associated with teachers on different awards
- joint accreditation or recognition of courses
- time-tabling of subjects for cross-institutional networking
- relations with private providers

- the linking of institutional vocational education and training with work-based training

(Lundberg 1996)

Nevertheless, positive responses have been forthcoming (Curriculum Corporation 1994; Schools Council 1994; Cherednichenko et al. 1995; Longshaw & Associates 1996).

A Modern Australian Apprenticeship and Traineeship System (MAATS), since re-named New Apprenticeships, was announced by the coalition parties in their policies for the 1996 federal election (LPA/NPA 1996a, 1996b). The principles of the New Apprenticeships system (covering apprenticeships and traineeships) were endorsed by the ANTA Ministerial Council in May 1996 (Vanstone & Kemp 1996). Australian Workplace Agreements, since authorised by changes to industrial relations legislation, are to remove perceived 'barriers in the industrial relations system' that may impede provision of training (Kemp 1996a).

New Apprenticeships will be based on locally negotiated workplace agreements, including training arrangements to which local providers will be expected to respond. New Apprenticeships will provide incentives for small business, and provide a 'top up' allowance for new apprenticeships and traineeships to minimum age-related levels. The system includes equity provisions related to literacy and numeracy, women, disadvantaged labour market participants and rural Australia, and quality safeguards. The Australian Student Traineeship Foundation will continue to develop industry-school links, and group training companies will be used to promote multiple workplace apprenticeship and traineeship arrangements (Kemp 1996a, 1996b, 1996c).

Competencies and entry-level training

Competency-based training has attracted broad support from federal and State governments as well as from industry where it is seen as a means of improving the quality and relevance of vocational education and training (Dawkins & Holding 1987; DEET 1991b; Carmichael 1992). However, competency-based training has been policy-driven change. The Australian Standards Framework levels were defined with negligible research to test their suitability, and national competency standards were usually defined on the basis of industry consultations rather than research about skill acquisition in the relevant occupations. In a similar way, ANTA's implementation strategy for the national training reform agenda, which proposed the revision of the Australian Standards Framework, was based on further consultations with various stakeholders (ANTA 1994a).

A limited research base underpinned much of the initial application of competency-based training by the former National Training Board. This approach, and the inadequate research support for it, were extensively criticised by educational researchers (Hager 1992; Jackson 1992; Stevenson 1992; Cornford 1993; Craigie & Collitts 1993; Watson 1993; Harris et al. 1995; Thomson 1995).

Attention has been drawn to the question of whether or not competence can be inferred from evidence about performance. If someone seems to perform specified tasks satisfactorily in the workplace, do we need any further evidence of their competence? At entry level, claims are sometimes made that performance alone is enough. However, the results of preliminary studies addressing this issue suggest that it is both important and a worthwhile direction for further work which can guide the development of learning and assessment strategies (Thomson 1991; Misko 1995).

The issue of understanding is probably important in relation to the 'training paradox'. People are taught what to do at work in circumstances or contexts and in ways that frequently have little similarity with the contexts and practices they will encounter in the workplace, yet they are expected to 'transfer' what they have learnt. This is a complex issue which deserves focussed attention (Matthews 1995). Provision of work-based training, which is generally an integral component of entry-level training programs (Moy 1996), can reduce the 'training paradox' problem.

The competency-based training program has been the subject of relatively extensive consultations in the course of the Employment and Skills Formation Council's inquiry that led to the AVTS. This led to redefinitions of the first two levels of the Australian Standards Framework (Carmichael 1992).

The application of competency-based training has also attracted substantial concern about national competency standards. A review of the training reform agenda found that the process of setting national competency standards was poorly understood (Allen Consulting Group 1994a). ANTA has included funding of development of vocational competency standards in ANTA resource agreements with industry training advisory bodies (ANTA 1994a). This process is beginning to bear fruit, with more focussed work being done by various ITABs (ANTA 1995a, 1996).

One important issue in relation to competency-based training is the balance to be struck between national recognition and enterprise relevance (see below). The former NTB had accepted recognised enterprise standards, but ANTA gave them active encouragement to increase industry 'ownership' of competency standards (ANTA 1994a, 1994b). The Australian Standards and Curriculum Council, serviced by ANTA, has been established to bring standards and curriculum development into a closer relationship.

Studies which illuminate the implementation of competency-based training and assessment indicate that the pace of change is slower and less comprehensive than policy-makers expected (Thomson 1990) and that it has been associated with a great deal of confusion (Owen 1993; Lundberg 1996).

Competency-based assessment and recognition of prior learning (RPL) were also introduced on a strongly policy-driven, rather than research-informed, basis (COSTAC 1990a; McGill 1990; Thomson 1992, 1995; Peddie 1993). Competency-based assessment (CBA) was initially introduced on a 'pass/fail' basis, without grading, because policy prescriptions considered grading to be necessarily related to normative rather than criterion-referenced assessment. This caused considerable negative reactions, among many TAFE staff and their clients (Lundberg 1996), and graded criterion-referenced or standards-based assessment is generally being introduced instead of general use of 'pass/fail' assessment. Graded criterion-referenced assessment requires substantial further research.

Competency-based assessment also required integration of on- and off-the-job assessment activities in courses involving work-based and institution-based learning, if the benefits of student-driven competency-based education and training were to be fully realised. This has been examined in a number of AVTS pilot projects, but relevant arrangements still pose significant difficulties, because the practice is far from routine.

The coalition will retain competency-based training as the 'common currency' of the New Apprenticeships program (Kemp 1996a).

Key competencies

The Finn report argued that 'individual and industry needs are leading to a convergence in general and vocational education', and proposed a set of key competencies which would be developed in young people whatever education and training pathway they follow. This would enhance the adaptability of people who had been developed in these competencies and the framework for the key competencies would offer 'new ways for industry to clarify its expectations of young people and the educational training system' (Finn 1991).

The Mayer committee was established to explore the concept of the key competencies and to develop operational definitions of an appropriate set of key competencies (Mayer 1992; Werner 1994). Following the Mayer report, further industry consultations (e.g. in 20 workshops in five States and the Australian Capital Territory [ACT] with 320 participants) saw six of the key competencies as relevant (with some clarification); while the seventh (using technology) required more generic definition (Australian Centre for Best Practice 1993).

Cultural understanding was recommended as a key competency in the Finn report, discarded in the Mayer report, and vigorously advocated by Queensland, which co-ordinated a consultancy study. The formulation of the content of the proposed eighth key competency in that study was highly value prescriptive. The push to have cultural understanding recognised as a key competency foundered in the ANTA Ministerial Council in 1996. While rejection of the proposed formulation is not queried, given the importance of internationalisation of Australia's economy and the multicultural character of Australia's workforce and consumers, this may need further consideration on the basis of a better conception of the competence required.

Given the role envisaged by the Finn committee for the key competencies, it is appropriate that these competencies seem to have sustained support from the business community (Halliday 1995).

The application of the key competencies was formally integral to the Australian Vocational Training System (Carmichael 1992). However, for this policy precept to be fully realised in practice would pose major issues of modification of assessment, to accurately report on attainments, and at least sufficient adaptation of curriculum to ensure that cross-curricular development of the key competencies actually takes place on an acceptably reliable basis (Lilly 1995).

Three approaches to operationalising the key competencies have been identified in audits of practice: treating them as 'implicit and in existence' without demonstration, explicit delivery in modules, and explicit and integrated development (Lilly 1994). The key competencies have been mapped on to the curricula in several jurisdictions, often in the 'implicit and in existence' mode of application. The practical effect of this is slight.

Actual testing of attainments against the key competencies and general 'explicit and integrated' application of these competencies would require substantial research on pedagogy and assessment, and curriculum development work. How would the key competencies be developed in young people in the various pathways? How would they be integrated into the curriculum for each pathway? The 'nature of the mental processes that enable trainees to develop the key competencies' probably varies between types of key competency and they are poorly understood at present (Gonczi 1995). Another threshold issue of whether, or under what conditions, key competencies are generic or transferable, is also one that requires further research.

This work is unlikely to be accorded a sufficiently high priority unless policy requiring testing of attainments in relation to integrated key competencies becomes clear, consistent and explicit. Also, there may be substantial issues of comparability (and a requirement for duplication of research) if significant interstate variations emerge in the key competencies.

The opposition of universities to application of the key competencies is well known. There is also substantial resistance to application of the key competencies in schools, particularly in independent secondary schools, although their relevance to vocational preparation is accepted by leading educators across all sectors (Lundberg 1995). The resistance to implementation of the key competencies in universities and at least parts of the school sector has implications for cross-sectoral co-operation in post-compulsory education and training.

The applicability of the key competencies in the Modern Australian Apprenticeship Training System seems to be encompassed within retaining competency-based training (Kemp 1996a, 1996b, 1996c).

Awards and funding

National or enterprise focus?

When the strategies for implementation of competency-based training were being developed, particularly from April 1989, there was a high degree of conceptual coherence between the national system of awards under the arbitration system and the national approach to competency standards in entry-level training.

That congruence unravelled as the role of the arbitrated award system has been steadily reduced in favour of enterprise bargaining. An enterprise focus in entry-level training would now have a similar degree of conceptual congruence with enterprise bargaining and the emerging Australian workplace agreements.

Against this more local or regional orientation, there is the phenomenon of globalisation, also the issues of portability, national recognition and structures for the recognition of prior learning (RPL). These issues suggest that national systemic arrangements also have a role.

There is necessarily a national consistency–enterprise flexibility trade-off in such matters. This trade-off was evident in the ambiguities in employers' responses to questions about competency-based training and recognition arrangements in a review of the training reform agenda (Allen Consulting Group 1994a; ANTA 1994a, 1994b). This trade-off has implications for regulatory and incentive frameworks.

A national focus requires more regulation, covering competency standards, accreditation and the National Framework for the Recognition of Training (VEETAC 1991, 1993; Ramsey 1993). Regulation tends to increase the need for incentives, reflecting the external benefits of national consistency. Further consideration is being given to replacing the National Framework for the Recognition of Training with a simpler alternative (Kemp 1996a), which has been considered previously (Ramsey 1993; Allen Consulting Group 1994a; ANTA 1994a, 1994b). The realities of a federal system will make this a difficult task.

An enterprise focus should require less incentives, because it should be closely matched to specific enterprise needs; but the low level of commitment to training by Australian enterprises (ABS 1994; Smith 1995) suggests that reliance upon enterprises undertaking increased investment in training in their own enlightened self-interest is most unlikely to produce substantially increased training activity. However important skill formation, research and development and technological change may be to the success of enterprises, there has been a persistent pattern of market failure in relation to all three on the part of the responses of Australian firms, who have responded slowly to even major tax incentives to invest in research and development. In the case of enterprise-based training, this pattern of market failure is not limited to Australia (Stern 1994).

Funding

There are a number of options for funding entry-level training: direct or indirect government funding from general revenues; government-regulated funding through levies on employers (including levies with exemptions for firms which demonstrate that they have exceeded specified levels of investment in training); and market-based measures, including individual trainee or employer funding, with or without government subsidies as incentives.

The Training Guarantee scheme was introduced by the Commonwealth Government after an extensive consultation by the Employment and Skills Formation Council. The scheme was consistent with similar initiatives in a number of other countries (including France, Fiji, Singapore, and Korea). Australia's scheme was introduced as a tax rebate scheme for training claimed by employers, and was criticised as a scheme for 'creative accounting'. It was suspended in the 1993 budgetary process, and has effectively terminated. Nothing has replaced the Training Guarantee as a vehicle for addressing the issues of coverage and equity effectively, despite the market failures which had led to its introduction (cf Stern 1994). This policy issue remains, but is largely ignored.

The question to be examined by researchers is whether or not the workplace agreements route will provide a satisfactory alternative system of incentives for employers to make an increasing provision of work-based training available (against the trends of recent years), so that other incentives like the Training Guarantee remain unnecessary.

The Australian National Training Authority was established to co-ordinate funding of the provision of vocational education and training, including entry-level training, within a 'co-operative federalism' framework and with an 'arms-length' relationship to TAFE providers. ANTA has developed a framework of national co-ordination of the vocational education and training system, including entry-level training (ANTA 1994c, 1994d, 1995a, 1995b, 1996), giving a somewhat more focussed approach to training reform (Lundberg 1994a, 1996; Allen Consulting Group 1994a; ANTA 1994a, 1994b).

The trend is towards increasing reliance on competitive market delivery of vocational education and training (Allen Consulting Group 1994b; ANTA 1994a, 1994b; Selby Smith 1995) possibly complemented by new forms of government incentives, such as greater use of tendering or introduction of voucher schemes (Lundberg 1994b; Allen Consulting Group 1994b). There are studies (based on the Australian Bureau of Statistics [ABS] data) of how households are contributing to meet the costs of vocational education and training (McKenzie 1995), of the contributions of employers to the system (Burke 1995) and of the growth of private providers (Anderson 1995). There is scope for considerably more research on private providers and for the development of improved data collections on private providers (Anderson 1995).

Structural distortions in government funding arrangements

Structural distortions in government funding arrangements have been a problem in the developing networking of delivery of vocational education and training (as proposed for the AVTS). This is because States and Territories fund government schools, the

Commonwealth contributes significantly to private schools, and Commonwealth, State and Territory funding for vocational education and training is co-ordinated through ANTA (Lundberg 1994a). This problem has been addressed to a considerable extent in the Senate review of ANTA, in which it is proposed that ANTA's funding guidelines be broadened to enable funding of vocational subjects by schools, and that schools contribute to the ANTA State training profiles that guide funding outlays.

Equity

The issue of equitable access to, and participation in, entry-level training remains one that requires continuing attention (DEET 1991c; Carmichael 1992; Reynolds & Barnett 1993; VEETAC/AEC 1993; Lyall & Hawkins 1993; Morley 1994a, 1994b; Bagshaw et al. 1995). This needs to include rectifying the gaps in the data on some disadvantaged clients in the NATMISS system for which the National Advisory Committee on Vocational Education and Training Statistics (NACVETS) is responsible (Lundberg & Cleary 1995). Literacy and numeracy problems that disempower a minority of students also require systemic responses (Watts & Watkins 1991).

Serious attention to the problems of effective access to vocational education and training in rural Australia will need attention to best practice (Cumming 1992; Kelty 1993; NBEET 1994; Lundberg 1995), application of open and flexible learning methods (Carmichael 1992) and possibly adaptation of institutional models to ones which can provide a more flexible, fair choice to students in regional Australia (Lundberg 1995).

Cyclical impacts on work-based entry-level training

There is evidence of a recurring pattern of strong cyclical impacts on entry-level training during 'bearish' or recessionary phases of the business cycle, in which there are sharp contractions in provision of opportunities for work-based entry-level training. This leads to substantial short-falls in trained personnel during 'bullish' or improving phases of the business cycle. This market failure would seem to call for a method of providing, on a counter-cyclical basis, increased government funding for work-based entry-level training at the earliest stages of the downward phase of the business cycle.

There is no evidence that this problem has been remedied by policy-makers, although the issue was highlighted in the former Employment and Skills Formation Council's 1992 report on *The Australian Vocational Certificate Training System* (Carmichael 1992). There is a pronounced pattern of a significant increased demand for skilled migrants in the buoyant phase of the cycle, to meet the shortfall in trained personnel which arises from the severe contraction in apprenticeship and traineeship commencements during recessions. The former ESFC proposed that increased incentives for employers to provide apprenticeships and traineeships should be 'triggered' by two successive quarters of less than-specified rates of growth (Carmichael 1992).

In 1997 and 1998, there is emerging a possible pattern of recession in the manufacturing sector, co-existing with overall growth in the economy (based on rural, mining and services growth). Such a pattern, if it develops, would be likely to lead to a substantial contraction in manufacturing apprenticeships, creating further problems for future availability of skilled personnel in the manufacturing sector. If this occurs, policy-makers will, once again, have failed to respond to analyses of the impacts of cyclical reductions in work-based entry-level training on trends in skill formation.

Apart from a focussed policy response, fully effective implementation of measures to secure work-based entry-level training against severe contractions, as recessions 'bite', may require development of improved statistical leading indicators. Improvements on past performance could, however, be made without improved leading indicators.

Findings and directions for further research

Gains

The contribution research has made to informing policy on vocational education and training could (and probably should) have been greater, but many of the key premises of policy have been assumed rather than being put to researchers. This is not, in itself, unusual (Wiltshire 1993). Research has, however, informed several areas, including: competence requiring knowledge and understanding as well as performance; competency-based assessment, including graded standards-based assessment; problems of policy implementation; and unforeseen consequences or limitations of official policies.

Gaps

Strategic policy-relevant research in vocational education and training is needed on:

- reasons for the decline in apparent retention to Year 12 since 1993
- reasons for the decline in provision of apprenticeship opportunities, and in the educational profile of students taking those that are available, in comparison with the growth in traineeships
- the relationship between employer and trainee participation in work-based training arrangements and incentives, including training wages and subsidies
- the learning processes associated with achieving competence
- graded standards-based assessment
- factors affecting transfer of knowledge and skill

Research in vocational education and training needs to be supported by a few important changes in vocational education and training statistics collections, particularly in relation to employment, education and training pathways from compulsory schooling, private providers and some categories of disadvantaged clients.

References

ABS (Australian Bureau of Statistics) 1994, *Employer training practices, Australia, 1994*, AGPS, Canberra.

ACTU/TDC (Australian Council of Trade Unions/Trade Development Council) 1987, *Australia reconstructed: Report of the mission to Western Europe*, ACTU/TDC, Melbourne.

Allen Consulting Group 1994a, *Successful reform: Competitive skills for Australians and Australian enterprises*, report to the Australian National Training Authority, Allen Consulting Group, Melbourne.

—— —— 1994b, *Establishing an effective Australian training market*, report to the Office of Training and Further Education, Allen Consulting Group, Melbourne.

Anderson, D 1995, 'Data sources and research on private training provision: Gaps, problems and implications', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne 12–13 October, Office of Technical and Further Education, Melbourne.

ANTA (Australian National Training Authority) 1994a, *Towards a skilled Australia: A national strategy for vocational education and training*, ANTA, Brisbane.

—— —— 1994b, *Proposals for more effective implementation of training reforms, including implementation*, ANTA, Brisbane.

—— —— 1994c, *Vocational education and training: Directions and resource allocations for 1995*, report to ANTA Ministerial Council, ANTA, Brisbane.

—— —— 1994d, *Guidelines for the development of 1995 State training profiles*, ANTA, Brisbane.

—— —— 1995a, *Guidelines for the development of 1996 State training profiles*, ANTA, Brisbane.

—— —— 1995b, *Vocational education and training: Directions and resource allocations for 1996*, report to ANTA Ministerial Council, ANTA, Brisbane.

—— —— 1996, *Report on national industry vocational education and training plans*, ANTA, Brisbane.

Australian Centre for Best Practice Ltd 1993, *Industry consultation on key competencies*, Australian Centre for Best Practice Ltd, Sydney.

Australian Committee on Technical and Further Education (chair: M Kangan) 1975, *TAFE in Australia: Report on needs in Technical and Further Education, April 1974*, (2 vols), AGPS, Canberra (Kangan report).

Australian Education Council Review Committee (chair: B Finn) 1991, *Young people's participation in post-compulsory education and training*, (3 vols), AGPS, Canberra, July (Finn report).

Australian House of Representatives Standing Committee on Employment, Education and Training 1989a, *The restless years: An inquiry into Year 12 retention rates*, Commonwealth Parliament of Australia, Canberra.

—— ——1989b, *Work in progress: Award restructuring and industry training*, Commonwealth Parliament of Australia, Canberra.

—— —— 1991, *Skills training for the 21st century: An inquiry into skills training*, Commonwealth Parliament of Australia, Canberra.

Bagshaw, B et al. 1995, *Gender issues affecting women's participation in the Certificate in Occupational Studies, 1991–1993*, South Western Sydney Institute of TAFE, Sydney.

BCA (Business Council of Australia)/Towers Perrin and CRESAP Australia 1990a, *Workforce 2000*, BCA, Melbourne.

BCA (Business Council of Australia) 1990b, *Training Australians: A better way of working*, BCA, Melbourne.

Beare, H & Millikan, R 1988, *Skilling the Australian community: Futures for public education*, Australian Teachers' Union and Commission for the Future, Melbourne.

Burke, G 1995, 'TAFE to VET: New data', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Bush, T 1992, 'Perspectives on labour market programs and the Australian Traineeship Scheme', in *Training research conducted in higher education*, conference/workshop papers, Darlinghurst, NSW, 16–17 July.

CAI (Confederation of Australian Industry) 1987, *Employer perspectives on the ACTU/TDC report 'Australia reconstructed'*, CAI, Melbourne.

—— —— 1991, *The Australian Vocational Education and Training System, January 1 1992*, CAI, Melbourne.

Carmichael report 1992 (see: Employment and Skills Formation Council).

Cherednichenko, B, Charleson, L, Pearce, J, & Toomey, R 1995, 'Best practice in industry-education links: An examination of the role of the Victorian Education Foundation in developing industry-education partnerships', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Clare, R & Johnston, K 1993, 'Education and training in the 1990s', EPAC background paper no.31, Economic Planning and Advisory Council, Canberra.

Committee of Inquiry into Labour Market Programs 1985, *Report*, (Kirby report), AGPS, Canberra.

Committee report, (chair: Mayer) 1992, *Putting general education to work*, Melbourne, (Mayer report).

Cornford, I 1993, 'Theories of skill development and research into the development of expertise: Some implications for competency-based training', *After competence: The future of post-compulsory education and training*, conference papers, Centre for Skill Formation Research and Development international conference, Brisbane, 1–3 December 1993, Griffith University, Brisbane, (2 vols), vol. 1, pp. 72–82.

COSTAC (Commonwealth-State Training Advisory Committee) 1990a, *An implementation strategy for competency-based training*, COSTAC, Canberra.

—— —— 1990b, *Report of the overseas mission to study developments in vocational education and training*, COSTAC, Canberra.

Craigie, D & Collitts M, 1993, 'Learning outcomes: The blind leading those who cannot see', *After competence: The future of post-compulsory education and training*, conference papers, Centre for Skill Formation Research and Development international conference, Brisbane, 1–3 December 1993, Griffith University, Brisbane, (2 vols), vol.1, pp. 98–106.

Cullen, R 1993, 'The impact of mass post-secondary education and training on employment in Australia: An analysis of qualification profiles in Australian industry', ANTA occasional paper 94/1, ANTA, Brisbane.

Cumming, J 1992, *Resourceful communities: Integrating education training and work for young people in rural Australia*, Australian Curriculum Studies Association, Canberra.

Curriculum Corporation 1994, *Vocational education in Australian schools*, Curriculum Corporation, Melbourne.

Dawkins, J & Holding, A 1987, *Skills for Australia*, AGPS, Canberra.

DEET (Department of Employment, Education and Training) 1989a, *Discussion papers 1–4: Entry-level training: Issues and opportunities arising from award restructuring*, DEET, Canberra.

—— —— 1989b, *Submission to the House of Representatives, Standing Committee on Employment, Education and Training Inquiry on the subject of industry training and award restructuring*, DEET, Canberra.

—— —— 1991a, *A new structured entry-level training system for Australia*, AGPS, Canberra.

—— —— 1991b, *Australia's workforce in the year 2001*, AGPS, Canberra.

—— —— 1991c, *Women in entry-level training*, AGPS, Canberra.

Deveson report 1990 (see: Training Costs Review Committee).

ESFC (Employment and Skills Formation Council) (chair: L Carmichael) 1992, *The Australian Vocational Training System*, NBEET, Canberra, (Carmichael report).

—— —— 1993, *Raising the standard: Middle-level skills in the Australian workforce*, NBEET, Canberra.

—— —— 1994, *The shape of things to come: Small business employment and skills*, NBEET, Canberra.

Finn report 1991 (see: Australian Education Council Review Committee).

Gonczi, A 1995, 'Developing key competencies in on the job training', *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Goozee, G 1993, *The development of TAFE in Australia*, NCVER, Adelaide.

Green, A & Steedman, H 1993, *Educational provision, educational attainment and the needs of industry: A review of research in Germany, France, Japan, the USA and Britain*, National Institute for Economic and Social Research, London.

Green, J 1996, *Training linkages for secure jobs*, ACOSS papers, no. 77, ACOSS, East Sydney.

Hager, P 1992, 'How convincing are the arguments against competency standards?', in *What future for technical and vocational education and training?*, conference papers, National Centre for Vocational Education Research international conference, Melbourne, 14–18 December, NCVER, Adelaide, (2 vols), vol. 1, pp. 73–87.

Halliday, S 1995, 'Australia 2010: Creating the future Australia', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Harris, R, Guthrie, H, Hobart, B & Lundberg, D 1995, *Competency-based education and training: Between a rock and a whirlpool*, Macmillan, South Melbourne.

Jackson, N 1992, 'Reforming vocational learning? Contradictions of competence', in *What future for technical and vocational education and training?*, conference papers, National Centre for Vocational Education Research international conference, Melbourne, 14-18 December, NCVER, Adelaide.

Kangan report 1975 (see: Australian Committee on Technical and Further Education).

Keating, P 1992, *A national employment and training plan for young Australians*, AGPS, Canberra.

—— —— 1994, *Working nation: The white paper on employment and growth*, AGPS, Canberra.

Kelty 1993 (see: Taskforce on Regional Development).

Kemp, D 1996a, 'A modern apprenticeship and training system', address to the MTIA National Personnel and Industrial Relations conference, Canberra Hyatt Hotel, 2 May.

—— —— 1996b, 'Training pathways to real jobs', address to the Australian Council of Social Service, Wesley Conference Centre, Sydney, 22 May.

—— —— 1996c, *Training for real jobs: The modern Australian apprenticeship system*, AGPS, Canberra.

Kirby report 1985 (see: Committee of Inquiry into Labour Market Programs).

Lilly, M 1994, *Audit and reporting on key competencies in apprenticeships*, National Centre for Competency Based Training, Melbourne.

—— —— 1995, 'Integrating key competencies', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Lloyd, D 1992, *Western Australian vision of excellence (WAVE)*, Department of Employment, Vocational Education and Training, Perth.

Long, M & Robinson, L 1995, 'ACER's longitudinal databases', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Longshaw & Associates 1996, *A report into school/employment interface training for the electrical/electronics industry*, ANTA, Brisbane.

LPA/NPA (Liberal Party of Australia/National Party of Australia) 1996a, *Pathways to real jobs: The coalition's employment and training policy*, Liberal Party of Australia/National Party of Australia, Canberra.

—— —— 1996b, *Schools and TAFE*, Liberal Party of Australia/National Party of Australia, Canberra.

Lundberg, D 1994a, *Where are we? Reviewing the training reform agenda*, NCVER, Adelaide.

—— —— 1994b, *Calling the tune: Market-responsive vocational education and training—a discussion paper*, NCVER, Adelaide.

—— —— 1995, *A fair choice: Post-compulsory education structures and networks*, DEET (Evaluations and Investigations Program), Canberra.

—— —— 1996, *Steering through rapids: The impact of the training reform agenda on TAFE managers*, NCVER, Adelaide.

—— —— & Cleary, M 1995, *Organising a fair go*, NCVER, Adelaide.

Lyall, K & Hawkins, S 1993, *Different futures: A study of the critical factors encouraging women's access to non-traditional entry-level training*, DEET, Canberra.

Matthews, T 1995, 'Transfer of learning to the workplace', *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education.

Mayer report, 1992 (see Committee report).

McGill, M 1990, 'Is there room for excellence in CBT?', conference papers, NCVER University/TAFE Training Research conference, 1–2 July 1993, Griffith University, NCVER, Adelaide.

McKenzie, P 1995, 'The dimensions of the training market: Employment-based training', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Misko, J 1995, 'Doing and knowing: Assessing task performance, knowledge and understanding—a preliminary study', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Morley, S 1994a, *What gets measured gets managed: Best practice case studies of women's recruitment and retention in non-traditional entry level training*, Vocational Education and Training Women's Taskforce, Canberra.

—— —— 1994b, *Women's participation in non-traditional vocational training*, Vocational Education and Training Women's Taskforce, Canberra.

Moy, J (ed.) 1996, *Work-based training*, (2 vols), NCVER, Adelaide.

NBEET (National Board of Employment, Education and Training) 1994, *Provision of post-compulsory education and training in non-metropolitan Australia*, AGPS, Canberra.

OECD (Organisation for Economic Co-operation and Development) 1993, *Industry training in Australia, Sweden and the United States*, OECD, Paris.

O'Sullivan, M, Strauss, P & Spark, C 1994, 'NSW TAFE Commission pilots controversial new training mode', in *Training Agenda*, vol. 2, no. 4, pp. 30–31.

Owen, C, 1993, 'Not drowning, just waving: Interviews with trainers in the workplace on competence and other matters', *After competence: The future of post-compulsory education and training*, conference papers, Centre for Skill Formation Research and Development international conference, Brisbane, 1–3 December, Griffith University, Brisbane, (2 vols), vol. 2, pp. 49–61.

Peddie, R 1993, 'Excellence, merit and "mere competence" in standards-based assessment', in *After competence: The future of post-compulsory education and training*, conference papers, Centre for Skill Formation Research and Development international conference, Brisbane, 1–3 December, Griffith University, Brisbane, (2 vols), vol. 2, pp. 93–105.

Ramsey, D 1993, *First review of the National Framework for the Recognition of Training (NFROT), final report*, VEETAC Working Party on the Recognition of Training, Melbourne.

Reynolds, R & Barnett, K 1993, *Threat and opportunity: Workplace reform and disability*, NCVER, Adelaide.

Rumsey, D and Associates 1994, *A study of the entry-level training needs of the retail industry and their relationship to the concept of the Australian Vocational Certificate Training System*, National Retail and Wholesale Industry Training Council.

Schools Council (chair: A Morrow) 1994, *The role of schools in the vocational preparation of Australia's senior secondary students: A discussion paper*, AGPS, Canberra.

Selby-Smith, J 1995, *The national competition policy review (the Hilmer report) and its implications for the vocational education and training system*, ANTA, Brisbane.

Smith, A 1995, 'Enterprise training: The factors that affect demand', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Stern, D 1994, 'Market-failure in firm-based education and training', in Husen, T & Postlethwaite, T N (eds), *International encyclopedia of education*, 2nd edition, Pergamon, Oxford, vol.6, pp. 3614–3617.

Stevenson, J 1992, 'Policies and practices in vocational education and training', in *What future for technical and vocational education and training?*, conference papers, National Centre for Vocational Education Research international conference, Melbourne, 14–18 December, NCVER, Adelaide, (2 vols), vol.1, pp. 213–224.

Sweet, R 1995, 'The naked emperor: Training reform, initial vocational preparation and youth wages', in *Australian Economic Review*, 110, second quarter, pp. 101–108.

Taskforce on Regional Development (chair: W Kelty) 1993, *Developing Australia—a regional perspective*, (2 vols), AGPS, Canberra.

Thomson, P 1990, *Competency-based training in TAFE*, TNRDC/NCVER, Adelaide.

—— —— 1991, *'Competency-based training: Some development and assessment issues for policy-makers*, NCVER, Adelaide.

—— —— 1992, 'Assessing competence: An overview of current problems and trends in Australia', in *What future for technical and vocational education and training?*, conference papers, National Centre for Vocational Education Research international conference, Melbourne, 14–18 December, NCVER, Adelaide, (2 vols), vol.2, pp 293–303.

—— —— 1995, 'Some thoughts on the past, present and future in VET research', in *Research and practice: Building the links*, conference papers of the Victorian VET Research conference, Melbourne, 12–13 October, Office of Technical and Further Education, Melbourne.

Training Costs Review Committee (chair: I Deveson) 1990, *Report of the Training Costs Review Committee*, (2 vols), AGPS, Canberra, (Deveson report).

Vanstone, A & Kemp, D 1996, 'Press release: Ministers agree to modernise apprenticeships', Ministerial offices, Parliament House, Canberra.

VEETAC (Vocational Education, Employment and Training Advisory Committee) Working Party on the Recognition of Training 1991, *National Framework for the Recognition of Training*, VEETAC Working Party on the Recognition of Training, Melbourne.

—— —— 1993, *A national qualifications framework—a paper for consultation*, VEETAC Working Party on the Recognition of Training, Melbourne.

VEETAC/AEC (Vocational Education Employment and Training Advisory Committee/Australian Education Council) Working Party on Post-Compulsory Education and Training 1993, *Australian Vocational Certificate Training System, Equity Strategy*, VEETAC/AEC Working Party on Post-Compulsory Education and Training, Canberra.

Watson, A 1993, 'Competency-based vocational education and training in Australia: Some unresolved issues', in *Australian and New Zealand Journal of Vocational Education Research*, vol. 1, no. 2, pp. 93–125.

Watts, D & Watkins, R 1991, *Post-school education and training: Literacy, numeracy, entry and selection for vocational education and training*, Northern Territory Department of Education, Darwin.

Werner, M 1994, *The development of generic competencies in Australia and New Zealand*, NCVER, Adelaide.

Wiltshire, K 1993, 'The role of research in policy making', in *Unicorn*, vol. 19, no. 4, pp. 34–41.

7 Vocational education in schools*

Robin Ryan

Context

Literature

There is a substantial body of literature on vocational education in schools but, while extensive, it is characterised more by pamphlets, pronouncements, manifestos and ministerial statements than by research findings, even in the broadest sense of the term. However, sufficient material of substance exists to identify some firm conclusions and a range of emerging issues.

It is evident from the literature that vocational education has emerged (once more) as a key issue for educational policy, with resonance in the wider community. As often occurs, there is a need for policy-makers to act in advance of a complete knowledge base. It is desirable, therefore, to pause to take stock of developments and to place them in a context provided by research.

---

* This chapter is a reprint of Ryan, R 1997, *Vocational education in schools*, Review of research, National Centre for Vocational Education Research, Adelaide.

Policy climate

One of the most extensively researched areas in the field concerns the pressures and motivations for increased attention to the vocational dimension of education. The trends involved have been observed world-wide. As an Organisation for Economic Co-operation and Development (OECD) administrator points out:

> *In the late 1970s and in the 1980s, most OECD countries experienced the following trends: profound technological and organisational change in many workplaces, unprecedented levels of youth unemployment and rapidly increasing participation in post-compulsory education.*
>
> (Conyer 1993, p. 66)

These ingredients have been summarised in the Australian context by Keating (Keating 1995), who points to dramatic change in the last decade. Retention rates to Year 12 have more than doubled, while full-time employment opportunities for teenagers have reduced significantly; higher education participation has grown substantially, while participation in vocational education has not. At the same time, how people participate in employment and the organisation of workplaces has changed dramatically under the impact of new technologies and in the globalisation of the economy (Keating 1995).

It is evident that the driving force in educational reform in Australia and elsewhere since the late 1970s has been the inability of policy to cope with a seemingly implacable rise in youth unemployment rates, in sharp contrast to the optimistic pursuit of social equity which marked educational innovation in the 1960s and early 1970s (Papadopolous 1994). In Australia, this has resulted in a series of public inquiries from the first School to Work Transition Task Force in 1976, to the Australian Education Council's *Review of young people's participation in post-compulsory education* (Finn 1991).

Initial policy responses tended to stress specific vocational instruction in a track completely separate from general educational provision. White's research has pointed to considerable similarities in the public policy response to youth unemployment, involving vocationally oriented reforms to the school curriculum, in the 1890s, 1930s and 1990s (White 1995).

Throughout the OECD, and certainly in Australia, there was initially a concentration on quantitative reform, with targets set for youth participation in education (Conyer 1993) and an emphasis on vocational education to compensate for the perceived failings of the traditional academic curriculum (Papadopolous 1994). However, just as too sharp a division of secondary education into vocational and academic streams was resisted by educators in the 1930s (White 1995), the trend in OECD countries since the emergence of renewed interest in vocational education in the 1980s has been to avoid streaming of this kind.

> *The early conscription of children and young teenagers into low status vocational programmes is becoming more and more anachronistic in the modern industrial state.* (McFarland & Vickers 1994, p. 15)

This reluctance to base policy prescriptions on too narrow a view of education has been reinforced in Australia by the clear preference of students and their parents for general education as the primary educational pathway. This is evident in participation data which show that the Australian community has firmly committed itself to school completion as the basis of education policy. From the mid 1980s, apparent Year 12 retention increased from 58 per cent to 77 per cent, before slipping back to 75 per cent in 1995 (Burke 1995, p. 37). Post-school vocational education has continued to prove relatively unattractive to teenagers (Sweet 1993; Taylor 1996).

Policy-makers have thus been faced with a definitive view from the Australian community that policy options to smooth the transition of school leavers to adult life roles, and to lay the foundations of employability, must be applied primarily in the context of secondary education. Schools are correspondingly faced with a much greater diversity of students, in ability, motivation and interests.

As McGaw points out, though, this should not be contrasted with a largely mythical past when senior secondary education was primarily designed for those intending university entry: even when only 15 per cent of the cohort completed secondary education, a mere third progressed to university (McGaw 1996, p. 98).

Despite what the OECD has termed the 'crisis in vocational and technical education' (OECD 1994, p. 9), it is widely accepted that vocational education must be one of the options adopted to provide a satisfactory experience and outcome for young people in secondary education, including the quarter who presently leave before completing Year 12. Equally, a consensus has been developing that the primary role of work-based education is in support of general education (ASTF 1996).

Australia's recent experience has been in many ways typical. As McGaw points out:

> *Some Australian systems started down this path of differential provision . . . when it proved difficult to achieve curriculum reform within the established Year 11–12 structure. None, however, was willing to abandon the established Australian preference for comprehensive secondary schooling.* (McGaw 1996)

Most Australian policy-makers would probably support the OECD's twin goals of integrating vocational with general education and school with work-based learning. As always, the crucial question is how this is to be achieved. While no simple, and certainly no low-cost, solution has emerged, a body of research exists which points to some likely effective directions for policy.

Expectations

An area which has received some attention from researchers and policy-makers concerns expectations which students and employers have of the educational system as a path to employment. The evidence available supports the general policy emphasis on school completion and achievement in general education.

It is clear that vocational education and work experience is highly valued by students (Schools Council 1994, 1995; Hannan et al. 1995). However, it is also clear that students perceive higher education as a more rewarding objective than vocational, with university preferred to TAFE by an almost two-to-one margin (Chapman & Smallwood 1992), although ironically there is an emerging trend for graduates subsequently to seek articulation to technical and further education (TAFE) qualifications (Werner 1996).

While student preferences, especially for courses leading to higher education, to some degree rationally reflect the rewards of various kinds of training, the expectations of those intending early workforce entry are frequently erroneous. Surveys of students' job expectations contrast sharply and unfavourably with labour force outcomes (DETAFE 1993).

There is a body of research evidence which suggests that employers have a clearer idea of what they prefer from the education system. Overwhelmingly, the preference is for general skills, such as those intended by the Mayer key competencies (Mayer 1992), rather than specific vocational training (Schools Council 1994; DETAFE/DECS 1994). Employers also value attitudinal and personal skills and some specify preferred academic subjects (Amy Longshaw & Associates 1996) although the Schools Council believes that with greater exposure, employers would favour some vocational and work experience subjects in the school curriculum (Schools Council 1994).

Developments 2.10

Programs

Since the 1970s, and at an accelerating pace in the later 1980s and 1990s, Australian school systems and individual schools have embarked on a wide-ranging set of experiments in what may be broadly described as work-related education. It is virtually impossible to collate numbers of participants, largely because of difficulties in definition as well as the simple non-availability of data for many short, school-developed initiatives. Moreover, data at system level, for example in relation to dual accredited programs, frequently describe the availability of programs, rather than actual take-up by students.

The picture is clearer for work-experience programs surveyed by the Australian Student Traineeship Foundation (ASTF) in 1995. Their evidence suggests that while many students participate in programs giving a slight exposure to the world of work, very few experience programs offering extended industry experience. The 1995 survey identified:

> *1065 school/industry programs, but only three per cent of participants were in programs exceeding 20 days in the workplace.* (ASTF 1996)

Extensive descriptions of actual programs are provided in the National Centre for Vocational Education Research's supporting material for its unpublished evaluation of Australian Vocational Training System (AVTS) pilots (NCVER 1994) and in the Compendium of Good Practice which accompanied the Schools Council's study of the role of vocational education in schools (Golding 1995).

The Curriculum Corporation, in a survey of developments (Curriculum Corporation 1994), pointed to six major innovations since the 1970s:

- work-experience programs
- school–industry link programs
- funding of specific vocational initiatives (e.g. the Participation and Equity Program [PEP], AVTS)
- development of co-operative programs with TAFE
- integration of employment-related competencies into existing curricula
- formal career education

The corporation argues that the various approaches tend not to be co-ordinated and are usually not integrated into the mainstream curriculum. Attempts to create a more vocationally relevant curriculum since the late 1970s

> *seem only to have created a system in which the academic curriculum has remained central while vocational options have been added in a piecemeal way.* (Curriculum Corporation 1994, p. 14)

Although there have been few programs for the most disadvantaged students, a major issue has been the identification of vocational programs with lower achieving students (Curriculum Corporation 1994).

Pathways and objectives

The flavour of current programs around the nation is given in a monograph by Keating, which identifies 'typical' programs (Keating 1995). For example:

- joint school–TAFE programs in New South Wales, which provide students with a higher school certificate (HSC) and a TAFE certificate in several industry areas
- 'Pathways' in Western Australia, which give students access to accredited programs in broadly defined vocational areas and includes accredited vocational education and training (VET) curriculum
- the Engineering Careers Pathway in South Australia, which allows credit transfer from schools into TAFE National Metals and Engineering Curriculum
- E (Employment) courses in the Australian Capital Territory, which offer students courses using industry competency standards
- dual recognition in Victoria, which allows students to gain both a Victorian Certificate of Education (VCE) and a certificate of training in a number of industry areas
- co-operative programs with TAFE, which involve 70 000 students annually in Queensland
- Northern Territory programs, which integrate elements of the school certificate and TAFE certificates
- the Tasmanian Certificate of Education, which provides a range of credit transfer arrangements into TAFE courses

Recently, there has been a shift of emphasis from simply expanding the over-crowded curriculum with dual accredited subjects towards a view of work experience as a learning vehicle in its own right. There is now a more vigorous attempt to develop curricula which utilise the unique instructional power of learning in natural settings.

The Australian Student Traineeship Foundation promotes activities in which structured learning in the workplace is viewed as a way of enhancing classroom education and in motivating learners, particularly those at risk of discontinuing. The foundation argues that the emerging consensus is that the primary purpose of structured workplace learning is to improve general educational outcomes and that the challenge is to develop school-industry programs with such consequences as an intention rather than a by-product (ASTF 1996, p. 4).

Possibly the best known scheme along these lines is the TRAC program (originally, 'training in retail and commerce'). Because of its association with the Dusseldorp Skills Foundation, TRAC has the benefit of being grounded in contemporary research findings about learning-in-context and encourages evaluation of outcomes.

Evaluations

Scharaschkin's findings on Tasmanian TRAC programs exemplify what research would expect from a successful program: it was found that this learning mode resulted in students acquiring knowledge and skills that:

- *were both generic and specific*
- *derived from both reflection and action*
- *integrate theory and practice*
- *are of both enduring and immediate value*

(Sweet 1995, p. 20; Scharaschkin 1995)

A range of other programs has been subject to various forms of evaluation. For example, the unpublished NCVER evaluations of AVTS pilots included a variety of school-based programs. The outcomes of these experiences seem to typify many work-related school programs.

Generally speaking, narrowly specified objectives were achieved, particularly student achievement of ASF level 1 competencies. Few schools attempted higher levels and indications were that the time required to achieve vocational competencies had been greatly underestimated for school students. Projects succeeded in producing a new range of pathways for students, with many schools emerging as vocational providers rather than using TAFE services and significant benefits in local networking with industry were reported (NCVER 1994).

On the debit side, problems were experienced in attempting flexible delivery, with few self-paced learning materials available. There was little use of recognition of prior learning (RPL) and credit transfer remained uncertain. At least in part this stemmed from complaints about the bureaucratic nature of the national framework. Assessment was also a major concern and schools experienced substantial logistical difficulties. Above all, attempts to integrate on and off-the-job training were only partially successful (NCVER 1994).

Many of the same issues were described in Scharaschkin's evaluation of an office skills project based in a Hobart secondary college but aimed at students who had left school (Scharaschkin 1995). Scharaschkin found that some of the attributes identified in the contemporaneous TRAC program were achieved in the AVTS pilot, but that integration of on- and off-the-job learning and collaboration between school and industry partners were more difficult to achieve and the learning outcomes were more narrowly focussed (as intended by the program) (Scharaschkin 1995).

The Schools Council's review of programs indicated that the availability of more diverse pathways has led to beneficial employment outcomes but that a danger exists of students being locked into narrow tracks. Credit transfer arrangements to TAFE were described as immensely clumsy, and dual accreditation, while an admirable attempt to allow students to keep options open, by its very existence indicated a need to bridge two separate sets of curricula and certification arrangements (Schools Council 1994).

A useful balance to broadly based evaluations is provided by Grosse's ethnographic study of three Tasmanian experiments—a TRAC program, an AVTS pilot and a three-week work placement

(Grosse 1993). This study highlighted the conflicting expectations experienced by students and the depth of the cultural differences between schools and workplaces. On the other hand, there were real benefits in developing local networks and in the commitment demonstrated by businesses and union representatives as well as by teachers and school administrators.

Difficulties were experienced in transferring knowledge both ways, between schools and workplaces, but genuine learning occurred:

> *It was the 'realness' of the experience in work placements that captivated students. The theoretical learning began to make sense when the students were able to apply the theory.* (Grosse 1993, p.31)

The 1994 and 1995 TRAC follow-up surveys indicated measurable benefits in access to employment and further study by participants (Sweet 1995) as well as personal development and learning outcomes. Sweet quotes research in the United States to indicate the most successful work-related education schemes are those built up by local initiative and this conclusion is supported by the Australian evidence (ASTF 1996; Schools Council 1994; NCVER 1994).

At the same time, it seems clear that an important role remains to be played at system and even national level by legitimising and resourcing local initiatives, providing backing in accreditation and professional development and generally by increasing coherence in initiatives and enhancing information flows to all parties (Schools Council 1994).

A further role for central policy lies in ensuring that local initiatives retain the concept of equal partnership. While schools have frequently failed to recognise the needs of industry, schemes which are fully 'industry led' tend to produce poor outcomes, as peak industry bodies acknowledged in the case of the British Youth Training initiative (Vickers 1994). Both parties have expertise to contribute and, as the OECD argues, to be educationally successful, linkage must be driven by pedagogical objectives (Conyer 1993).

Learning from work

There is now a substantial body of research which supports the value of learning at and from work, not simply for the vocational skills it imparts, but for its contribution to general education. The study of learning in natural settings was a matter of scholarly interest in the 1930s but interest waned until a revival in the 1980s. Increasingly, emphasis has focussed on authentic activity and sited cognition, in which the environment provides the tools needed by the learner (Billett 1992).

Sweet suggests that the research demonstrates that flows exist from problem solving to understanding of basic principles, and that learning about abstract thought and symbolic manipulation follows from teaching meaningful practical contents. It also shows that work-based problem solving involves a combination of social, technological, material and symbolic resources (Sweet 1993).

Much of this research is based on studies of how expert behaviour is developed. These studies show that context-specific knowledge is crucial to the expert's use of skills (Golding et al. 1996; Misko 1995). Experts draw on a variety of cues from their environment and studies of expert-novice differences place great emphasis on domain-specific knowledge of the expert (Billett 1992).

The consensus of United States (US) research on school-based vocational education is that vocational education can enhance academic skills of all students if given clear and sustained attention. Vocational education can also impact on at-risk students, but only as part of a comprehensive array of services. However, in all cases, sustained efforts are required if vocational curricula are used to teach higher-order thinking skills (Copa & Bentley 1992).

What is evident from the literature is that achieving transfer of knowledge and skills from work settings to school and school to workplaces is an extremely complex task. In Australia, policy-makers have relied on the concept of competencies as the basis for their assumption that there is an essential identity between skills learned in one environment and those in another. It has been assumed that vocationally specific education can be used to teach core or generic skills, such as those described in the Mayer report.

This is an imprudent assumption in the face of a substantial body of work describing the complexity of knowledge transfer (Misko 1995). Research was undertaken on the skills gained through learning vocational competencies by the Flinders Institute for the Study of Teaching on behalf of the South Australian Department for Employment, Training and Further Education. This emphasises that the way skills are acquired is linked to specific industry contexts and there is no 'royal road' to widespread transference (Hattam & Lawson 1996).

Misko's survey of research points out that transfer cannot be expected to occur spontaneously and that it is essential that explicit provision be made for the teaching of skills transfer (Misko 1995). Clearly this has considerable implications for the types of programs offered in schools and for the resources required to underpin them. It may also help explain continuing difficulties in assessment, accreditation and articulation among sectors, despite considerable improvements in central accreditation machinery and the formal delineation of intersectoral pathways (Schools Council 1994; Curriculum Corporation 1994; Weller 1995).

The difficulties which have arisen in securing the transfer of knowledge and skills from one environment to another may be a cause of the tensions which have emerged between schools' and industry-based assessment systems. Many would argue that it would be as unwise to allow school education to be dominated by industrial assessment standards as it has been by university entrance requirements. Moreover, secondary education systems have in recent years made significant advances in forms of authentic assessment, which can effectively identify competences acquired without distorting broader educational objectives (Afrassa 1995).

Students and participation

It is difficult to find systematic data on which students participate in vocational education and work-based education and on how they are selected. In relation to work placement, it seems that while there are many programs, their impact has been lessened because either only a few students are involved in extended programs, or many students take part in very brief programs (Ainley & Fleming 1996).

More should be known about the experience of students in work experience placements after the publication of a survey of 120 000 students in Years 11 and 12 by Richard Tease in an Australian National Training Authority Research Advisory Council (ANTARAC) funded project (1997). A second ANTARAC-supported project, currently underway by Jennifer Angwin and collaborators, will examine VET provision for disadvantaged groups, including pathways from school to VET.

The Curriculum Corporation described as a major issue the fact that vocational education remains identified with lower-achieving students (Curriculum Corporation 1994) and the Schools Council is concerned that very little progress has been made to diminish the general-versus-vocational education divide (Schools Council 1994).

The Curriculum Corporation makes the point that, unlike the US and some other countries, the argument is seldom presented in Australia that vocational education should be for all students. This seems a curious gap if the argument is accepted that work-based learning is an effective support to a wide range of general and academic skills. It would seem possible to develop a highly demanding work-related curriculum for high-achieving students, both for their own benefit and to avoid marginalising vocational education as a whole.

Some countries have attempted, if not comprehensive vocational education, at least the creation of a high-quality vocational stream. In France, for example, there is a vocational baccalaureat and the availability of 'alternance'—the alternation of extended periods of education and work experience. Apart from the resource intensity of such a program, one drawback is that it has lowered the standing of traditional vocational education subjects (Conyer 1993).

While vocational initiatives suffer from marginalisation, there is, paradoxically, a degree of selectivity in them based on careful targeting of clients. This has been observed in US programs (Bailey 1992) and is illustrated in Scharaschkin's evaluation of an AVTS pilot, where selection processes were used to create a 'high quality pool' (Scharaschkin 1994).

One consequence is that there are few programs for the most disadvantaged students (Curriculum Corporation 1994), although there are isolated examples, such as an AVTS pilot for homeless youth (NCVER 1994). Rural students have access to a narrower range of opportunities although there have been successes in distance/mixed-mode delivery in regional areas (Tower 1994).

The Schools Council argues that vocational programs can be utilised to compensate for disadvantage, but does not give details (Schools Council 1994). A NSW review indicated that young women have a low participation in vocational programs, with considerable gender segmentation in modules (NSW TAFE Commission 1996). On the other hand, specific interventions such as 'Tradeswomen on the Move' seem to have produced favourable results and a good fit with work-education for girls (DETAFE 1994).

Research on students at risk of leaving school early shows clearly that dissatisfaction with subject content and with school culture are the main reasons for departure, rather than poor achievement. Holden and Dwyer argue that this requires school programs to be more reality based: vocational programs could serve an important function for these youth (Holden & Dwyer 1992).

It is difficult to find information on school-based vocational education for aboriginal students. Teasdale and Teasdale point out that school, particularly secondary school, has not been a happy or educationally satisfying experience for indigenous Australians (Teasdale & Teasdale 1996) and it appears concentration has been on promoting general education at school and innovative vocational education programs beyond.

In general, vocational education remains marginalised as an 'alternative' curriculum (DETAFE/DECS 1994) while providing few benefits to the severely disadvantaged.

Resources and logistics

There is little systematic evidence on the resource requirements of work-related education, although the comprehensive survey of programs in action completed by the Schools Council in 1994 led it to include in its final report a section headed 'The implementation of vocational courses is costly for schools' (Schools Council 1994, p. x).

Two key elements identified by the council are the employment of program co-ordinators and the availability of appropriate professional development for teachers. Both were claimed to be essential to the practical and educational success of programs. Costs for professional development can range from $480 to $3000 per course per teacher (Schools Council 1994, p. 69).

Other costs include the development of learning materials and the costs of services provided by TAFE. The latter are increasing as TAFE institutes become more autonomous and more market based. There is considerable contention over which sector should bear what share of the costs and over access to public funds designated for vocational education. There are costs for schools in equipment, liaison with central authorities, establishing local networks, running information sessions, negotiating with tertiary institutions and additional teaching time (Schools Council 1994).

These comments by the Schools Council at least indicate the need for more systematic studies of resource demands arising from vocational education programs in schools. A significant step in this direction has been taken by the Victorian government in commissioning the Centre for the Economics of Education and Training to examine the costs of dual recognition arrangements in the Victorian Certificate of Education. Results have not been published at the time of writing, but preliminary indications are that costs may be no greater than for 'mainstream' school curricula for some types of vocational education. Essentially, this seems to apply where programs can be delivered in school.

However, to go beyond dual recognition and to purchase training from external providers or to encourage the widespread provision of real work experience—with a sustained effort to integrate this learning into the wider school curriculum—appears likely to be a more resource-intensive process, at least in the establishment stage. Experience in schools suggests the need for dedicated staffing for program co-ordination and industry liaison, at the very least (Schools Council 1994, 1995).

Sufficient experience has now been developed in running work-based schemes for elaborate guidelines to be prepared covering work placements, duties of host employers, students and schools, insurance, legal liability and duty of care, payment of students and adherence to awards and legislation and relations with unions. The literature does not indicate major difficulties with these practical issues, but the existence of extensive guidelines is testimony to a lengthy institutional learning experience and the need for experienced co-ordinators.

Perhaps more important than the costs and logistical difficulties are the sometimes profound incompatibility between school and work cultures. Sometimes this emerges in difficulties in practical matters like timetabling and organisation (NCVER 1994) but also reflects fundamentally different outlooks on society and the position of the individual (Curriculum Corporation 1994; Grosse 1993).

While more systematic research is needed on costing various models of vocational and work-related education in schools, it is essential to bear in mind that the primary resource required is human. The burdens placed on individual employers and teachers and school administrators by work-related education are considerable and these may limit the extent to which initiatives can be applied.

In Britain, for example, research by the Policy Institute indicates that lack of available placements was the key factor in a decline in vocational programs for 16–18 year olds. Between 1989 and 1992, for example, the proportion of 16 year olds receiving formal work-based training fell from 32 per cent to 20 per cent (*The Times*, 25 October 1996). The fundamental resource issue, therefore, is the continued readiness of both employers and teachers to participate in learning partnerships.

Findings and directions for further research

The research evidence, while incomplete, clearly points to a number of findings.

- Australian students, employers and parents have chosen to focus on school-based general education as the principal pathway to employment and adult life.
- Within that context, there is a role for increasing use of vocational and work-related education.
- Education which includes exposure to real work in real workplaces is highly valued by students and can greatly enhance the acquisition of the skills sought in general education.
- The work-based education which works best is that which results from genuine partnerships and networking at local level.
- Ways must be found for system and national support for local initiatives in accreditation and articulation, resourcing, monitoring, information provision and policy coherence without diminishing local enthusiasm and control.
- Integration of vocational and general education and of institution-based and workplace initiatives remains poor.
- The transfer of knowledge required by an integration philosophy will not take place spontaneously or because general and specific skills are both described as 'competencies'; sustained effort is required to effect transference.
- Vocational education remains limited by the conception that it is for lower-achieving students. At the same time, many pilot schemes rely on selectivity to achieve their objectives, while few possibilities

of vocational education for disadvantaged or at-risk students have been exploited.

- Effective vocational education is extremely resource intensive and requires fundamental changes to school cultures and organisation. The incompatibility between traditional teaching cultures and those supportive of work-related learning need to be addressed by appropriate professional and organisational development strategies.
- Professional development requirements represent one of the major costs of work-related education. The resource challenge goes beyond funding: committed personnel and appropriately innovative program designs will also be in short supply.

These findings imply an agenda for further research and development. This agenda would include:

- ways of promoting work-related education to all ability and social groups and for changing student and community stereotypes of vocational education
- assessment and accreditation mechanisms which take into account the differential nature of generic and specific competencies and the different cultures of schools and workplaces. Schools should continue to develop authentic assessment without being dominated by industry standards, a dominance no more desirable than that exercised by tertiary entrance
- continuous monitoring of programs and systematic collection of student participation and selection data
- more rigorous monitoring of educational and employment outcomes
- assessing the benefits of more diverse institutional and structural arrangements in schools or in cross-sectoral institutions
- the most appropriate kinds and methods of professional development for teachers
- the development of curricula which promote the integration of general and vocational learning
- greater clarification of the nature and role of competencies and their compatibility with academic and general education objectives
- the logistics, planning, resourcing and managing of initiatives

Although extensive, this is by no means a complete agenda.

An important issue which emerges from a review of the literature is that its diversity makes the development of generalisations difficult. Much has been learnt in a practical way about the conduct, benefits and pitfalls of work-related education. What is missing from a researcher's perspective is systematic analysis.

While the nature of evaluations so far conducted would not provide a basis for formal meta-evaluation (McGaw 1988), more could be done in the form of narrative integration—that is, by qualitative, descriptive attempts to distil common themes and findings. Moreover, it should now be possible, given the range of initiatives continually appearing, to conduct relatively controlled studies, or at least systematic evaluations based on pre-specified criteria.

At present, what emerges from research is the conclusion that it is possible to deliver substantial educational benefits of a broad and enduring nature from vocational education programs in schools, but that it is difficult to do so. There are indications that some programs are achieving at least part of the benefits the literature promises. There are indications of what constitutes good practice, especially at local level. But relatively little is really known.

Enthusiasm for vocational education needs to be tempered by critical investigations (Poole 1992) and basic concepts like competency need to be explored at a conceptual level (Hager 1995) as well as empirically tested. Above all, there needs to be a greater awareness of what experience of work-related education is like for participants—local business people, teachers, unionists and workers and, above all, students. Illuminative evaluations, based on ethnographic or other methodologies, can help policy-makers appreciate what policy means for those at its endpoints (Grosse 1993) and thus produce policy which works.

References

Afrassa, TM 1995, 'National examinations in Ethiopia and South Australia: A comparative study,' *Studies in Educational Evaluation*, 21.

Ainley, J & Fleming, M 1996, *School industry programs: National survey 1995*, Australian Student Traineeship Foundation, Melbourne.

Amy Longshaw & Associates 1996, *School/employment interface: Training for the electrical/electronics industry*, Electrical and Electronics Industry Training Advisory Board, Adelaide.

ASTF (Australian Student Traineeship Foundation) 1996, National program coordinators' conference, Mt Macedon, Victoria.

Bailey, T 1992, *School/work: Economic change and educational reform*, National Centre for Research in Vocational Education, Berkeley, California.

Billett, S 1992, 'Developing vocational skills in the workplace,' Conference on Training Research Conducted in Higher Education, July, Darlinghurst, NSW.

Burke, G 1995, *Demand for and dimensions of education and training: Australia from 1988*, AGPS, Canberra.

Chapman, G & Smallwood, J 1992, *Students' perceptions of TAFE*, National Centre for Vocational Education Research, Adelaide.

Conyer, N 1993, 'Post-compulsory vocational education and training: An overview of some developments in OECD countries', *Curriculum Perspectives*, vol. 13, no. 3.

Copa, G & Bentley, C 1992, *Vocational education*, National Centre for Research in Vocational Education, University of California, Berkeley.

Curriculum Corporation 1994, *Vocational education in Australian schools*, Melbourne.

DETAFE (Department for Employment, Training and Further Education, South Australia) 1993, *Are school leavers realistic about their vocational interests?*, Youth labour market series, Adelaide.

—— —— 1994, *South Australian tradeswomen on the move*, Adelaide.

DETAFE/DECS 1994 (Department for Employment, Training and Further Education; Department for Education and Children's Services), *Options and pathways*, Adelaide.

Finn, B 1991, (chair) *Young people's participation in post compulsory education*, AGPS, Canberra.

Golding, B, Marginson, S & Pascoe, R 1996, *Changing context, moving skills*, AGPS, Canberra.

Golding, F 1995, *Compendium of good practice*, Canberra.

Grosse, J 1993, 'Learning at work: Working at learning,' thesis submitted for the degree of Master of Social Science, University of Tasmania.

Hager, P 1995, 'Assessment of knowledge, attitudes and values', in *Key aspects of competency-based assessment*, National Centre for Vocational Education Research, Adelaide.

Hannan, B, Ferguson, S & Pollock, J 1995, *Charting a course: Students' views of their future*, AGPS, Canberra.

Hattam, R & Lawson, M 1996, *Conclusion: Issues arising from the research in teaching and learning the key competencies in the vocational education and training sector*, Flinders Institute for the Study of Teaching, Adelaide.

Holden, E & Dwyer, P 1992, *Making the break: Leaving school early*, Institute of Education, University of Melbourne.

Keating, J 1995, *Australian training reform: Implications for schools*, Curriculum Corporation, Melbourne.

Mayer, E 1992, *Putting general education to work: The key competencies*, Australian Education Council and Ministers for Vocational Education, Employment and Training, Melbourne.

McFarland, L & Vickers, M 1994, *The context and rationale for the reform of vocational and technical education*, Paris.

McGaw, B 1988, 'Meta-analysis,' in *Educational research methodology and measurement*, Pergamon, Oxford.

—— —— 1996, *Their future: Options for reform of the higher school certificate*, Department of Training and Education Coordination, Sydney.

Misko, J 1995, *Transfer*, National Centre for Vocational Education Research, Adelaide.

NCVER (National Centre for Vocational Education Research) 1994, 'Implementation review of the Australian Vocational Certificate System pilot projects', Adelaide.

NSW TAFE Commission 1996, *Young women and vocational education and training*, Women's Education and Training Coordination Unit, Sydney.

OECD (Organisation for Economic Co-operation and Development) 1994, *Vocational education and training for youth: Towards coherent policy and practice*, Paris.

Papadopolous, G 1994, *Education 1960-1990: The OECD perspective*, Paris.

Poole, M 1992, 'Summary and conclusion,' in *Education and work*, Australian Council for Educational Research, Melbourne.

Scharaschkin, R 1994, *Learning together on the job*, Department of Education and the Arts, Hobart.

—— —— 1995, *Learning from TRAC*, Department of Education and the Arts, Hobart.

Schools Council 1994, *The role of schools in the vocational preparation of Australia's senior secondary students: final report*, AGPS, Canberra.

—— —— 1995, *Students' attitudes towards careers and post school options for education, training and employment*, AGPS, Canberra.

Sweet, R 1993, 'Learning in the workplace: A policy perspective,' *Australian TAFE Teacher*, vol. 27, no. 2.

—— —— 1995, 'Linking schools and workplaces,' *Australian TAFE teacher*, vol. 29, no. 4.

Taylor, R (Chair) 1996, *Report of the review of the ANTA agreement*, AGPS, Canberra.

Teasdale, J & Teasdale, R 1996, *Pathways to where? Aboriginal and Torres Strait Islander participation in vocational education and training*, NCVER, Adelaide.

The Times, 25 October 1996.

Tower, L 1994, 'Keeping mixed mode delivery "On Trac"', TAFE Research Association Conference, Wollongong.

Vickers, M 1994, 'Learning through work experience,' in *Training Agenda*, vol. 2, no. 2.

Weller, S. 1995, 'Current issues and practice in recognition,' in *Training Agenda*, vol. 3, no. 4.

Werner, M 1996, Issues regarding higher education graduates in vocational education and training, unpublished report, NCVER/South Australian DETAFE.

White, M 1995, 'Youth, employment and post compulsory education: Crisis policy-making in three Depression decades', *Australian and New Zealand Journal of Vocational Education Research*, vol. 3, no. 1, NCVER, Adelaide.

8 Public and private training provision*

Kate Barnett

Public–private provision of VET post national training reform

Reform of Australia's vocational education and training (VET) system has been extensive and is a process which, in response to changing economic and industry conditions, is ongoing. The degree and impact of the change resulting from training reform is in itself a research issue, because the long-term impact of the change process as a whole, on individual providers as well as on the system itself, is not known. It would appear that research has been focussed on aspects of change (for example, competitive tendering, competency-based training) but no coherent in-depth analysis of the entire system has been conducted. Given the extensive policy formulation which has occurred, a significant amount of which has been implemented without a research base, it is imperative that this omission be rectified with the commissioning of research which is directly linked to VET policy.

The demand for a more efficient and effective training system came from both industry and government sources, and was a response to profound changes in Australia's economy, changes which, because of its relative lack of international competitive ability, spelt vulnerability for Australia during the late 1980s. Government policy has endorsed the link between workforce skill and the flexibility needed for industry to adapt successfully to changing economic circumstances (ESFC 1989).

---

* This chapter is a reprint of Barnett, K 1997, *Public and private training provision*. Review of research, National Centre for Vocational Education Research, Adelaide.

The changes required to achieve this outcome were initially described under the umbrella term 'training reform agenda', a package of reforms which was agreed to by Commonwealth, State and Territory ministers, and initiated with two special conferences in April 1989 and November 1990. The agenda had broad support from employer and employee interest bodies in industry and constituted a national policy approach comprising a number of components new to the Australian VET sector, including:

- the development of national competency standards and competency-based training
- a national framework for the recognition of training
- an open training market
- increased competition between public and private providers of training
- a blurring of the divisions between public and private provision of training

It is obvious that the last three components are closely interlinked, resulting in a significant proportion of research examining public and private provision of VET being focussed on the competitive training market, and its impact on training providers.

What is meant by an open or competitive training market?

The most specific definition and description to date of this term is offered by the Allen Consulting Group (ACG). A study was conducted for the Victorian Office of Training and Further

Education (OTFE) to determine the extent and character of the training market, the patterns of competition within the VET sector and trends and accomplishments of existing market practices. This study, by the Allen Consulting Group (ACG), defines the training market as:

> *. . . that part of the education and training system which provides individuals with the skills and learning expressly required by enterprises and industry.* (ACG 1994a, p. 1)

The analytical framework adopted by the ACG (1994a) distinguished providers (for example, technical and further education [TAFE]), purchasers (governments, enterprises and individuals), products (that is, skills), clients and outputs. The study found that rather than a single training market, a number of sectors co-existed which were characterised by specific market structures, across which market participants could be delivering training at any one time.

National training reform has promoted competitive delivery of VET by seeking to remove the impediments faced by non-TAFE providers and encouraging public providers to operate in a more entrepreneurial fashion. By endorsing an open training market, a more significant role for private providers was automatically created.

However, this change in policy direction was initiated with a dearth of research and statistical evidence about the nature and operation of private provision and about the social and educational implications of altering the public–private balance by market-driven provision (Anderson 1994). It is only in the past four years or so that this knowledge gap has begun to be addressed. However, even so, it is apparent from this review of literature that more research will be needed in order to obtain comprehensive information about the factors which influence the training market and, within this, of the most appropriate strategies to foster a dynamic balance between public and private provision of VET.

Research which has been undertaken in relation to public and private provision of VET can be grouped into two main areas of enquiry. These two areas are:

- characteristics of VET providers
- the provision of VET in a competitive training market, involving:
  - public versus private providers
  - adoption of components of training reform by public and private providers

This chapter is structured to reflect these key areas of enquiry, with the final section identifying areas requiring further research.

Characteristics of VET providers

Dimensions of the training market

The Allen Consulting Group (1994a) has provided a detailed analysis of the size and extent of the VET training market and estimated the total size of the market in financial terms to be about $6.5 billion.

The largest provider in the VET sector was identified as TAFE with $3 billion of revenue. ACG estimates (see table 1) show that government funding accounted for just under half the income of the training market, with enterprises providing the next largest major source (a minimum estimate of 40 per cent, excluding some $2 billion of employee costs incurred while undertaking training).

ACG's estimates were hampered by shortfalls in information regarding major areas of spending. However, based on evidence obtained through research and interviews, ACG estimated the absolute size by sector and in terms of upper and lower limits for the year 1992. They noted that the most accurate information available related to major types of VET providers and found that TAFE was the largest sector, followed by training offered by the suppliers and manufacturers of equipment.

Training offered by enterprises accounted for the second largest portion of training dollars. This is training conducted in-house as opposed to contracted externally. Commercial providers and non-profit training organisations were next, followed by adult community education providers. The smallest sector covered private business colleges.

Table 1, adapted and reproduced from ACG (1994a, p. 4), summarises this information. On this basis, ACG estimated that the overall size of the training market was between $6.5 billion and $8.6 billion in 1992 (1994a, p. 5), with slightly less than half of this funding deriving from the Commonwealth Government and the State governments. Of the remainder, 43 per cent was sourced from enterprises (most of which was spent on training not leading to qualifications) and seven per cent from individuals (1994a, p. 6).

Table 1: Estimates of size of major training provider groups

Provider	Estimated size (1992, $m)		
TAFE	2934		
Supplier, equipment manufacturer	1000	–	1700
Other (enterprise internal training, spending only, excluding employee salary costs during training)	1100		
Commercial training businesses	500	–	1000
Non-profit training organisations	500	–	1000
Adult and community education centres	250	–	500
Industry skill centres	200	–	250
Business colleges (ABS defined, involving secretarial and private commercial colleges)	60	–	150
	6544	**–**	**8634**

Source: ACG 1994a

Private VET provision

Classification of private providers

Although VET providers are often described in terms of their sectoral base—private or public—this segmentation is not a clear one. It disguises the fact that providers in either sector do not necessarily operate exclusively within one sector, and furthermore it suggests a degree of homogeneity which does not in fact exist, particularly among 'private' providers. Too often, private providers have been distinguished on the basis of sectoral location rather than according to their method of operation. Research has confirmed that public and private provision of training cannot be readily identified in terms of separate sectors, or even in terms of individual providers (Anderson 1993; Kell et al. 1995).

Anderson (1995) defined 'private' providers in terms of:

> *. . . the provision of post-school VET in the non-government sector by privately financed individuals and institutions operating more or less independently of government control.* (Anderson 1995, p. 2)

In relation to private providers, a widely used, but far from definitive, classification identifies four main groups—commercial, community, industry and enterprise providers. This classification has been used by many of those researching public and private VET provision and it has some limitations (particularly with regard to overlapping provision, such as adult community education providers who deliver vocational training on a fee-for-service basis). However, the classification at least provides a starting point from which to analyse the roles and methods of operation of the various types of VET providers. These categories are also used by Commonwealth, State and Territory training authorities for the purpose of provider registration and usually involve defining the four provider groups in the following way:

- *Commercial providers*—those providing training on a commercial, usually for-profit basis, and typically deriving most of their income from private sources by attracting individual consumers on a fee-paying basis. This category comprises most privately owned colleges, schools and training institutions.
- *Industry providers*—generally organisations providing training which is developed to meet industry-wide need. Often this training is delivered on a non-commercial basis to members of professional and trade associations, but this does not mean that industry providers operate on a non-profit basis.
- *Enterprise providers*—typically in-firm providers whose operation involves the development and training of enterprise staff. Programs are delivered in a number of ways including on the job by supervisory staff as well as by external training consultants or by the firm's own training staff as part of specific training initiatives.

- *Community providers*—or adult community education (ACE) providers, community-based providers usually operating on a non-profit basis, being largely subsidised by governments and with low cost contributions from consumers. Neighbourhood houses are an example of this category of provider. However, the advent of training reform has seen many ACE providers add a commercial role to their traditional role of lifelong learning, and learning which can benefit a local community.

The classification described above serves some useful purposes, but from a research perspective it is probably that more meaningful information can be obtained by analysing and comparing outcomes achieved by different providers. It would appear that such research has been almost non-existent.

At present, insufficient information exists (either nationally or at State/Territory level) to allow accurate comparison of providers' performance at the point of delivery (ACG 1994a; Anderson 1994). That is to say, there is an absence of outcomes-related data for both TAFE and non-TAFE providers. From a market perspective, where consumer choice is critical, this omission limits the basis from which VET customers can make informed choice regarding their selection of providers.

Provider registration

The implementation of procedures for the registration of providers and the accreditation of courses has been significant in providing a basis from which to quantify the VET sector in terms of its providers.

During 1993 there were more clients involved in courses not leading to formal qualifications than there were in studies leading to qualifications (ABS 1994). In 1993 more private providers were offering non-accredited than accredited training (ACG 1994a, p. 9). Considered together these facts suggest that the unregulated segment of the private sector is larger than the regulated segment (Anderson 1995, p. 8). However, this is extremely difficult to verify, and the accurate identification of the size of the total private sector remains an ongoing problem.

Furthermore, Australian Bureau of Statistics data (ABS 1994) indicate that in 1993, 39 per cent of private providers were registered with a State Government recognition authority and that 25 per cent of commercial providers were conducting accredited courses. In addition, six per cent of training courses conducted by private providers in 1994 were accredited and some 13 per cent of training providers conducted some accredited training courses, with most of these being large size providers.

Characteristics of the private VET sector

Neither the ABS nor individual government agencies had, until recently, kept data on private training provision on a regular or comprehensive basis. As recently as 1992, the Department of Employment, Education and Training concluded that there was no reliable information about the number of private providers (DEET 1992). The Organisation for Economic Co-operation and Development has also highlighted a similar lack of data in its member countries (OECD 1991). Anderson (1995, p. 2) has argued that the absence of official statistics in this area of the VET sector has contributed to the lack of research.

However, in 1994 the ABS released the first comprehensive survey of training delivered by private training providers, based on information collected about training activity between January and December of 1994. The survey involved private sector providers delivering VET courses on a commercial basis, that is, by charging fees which at least covered the costs of the training provided.

Survey findings

Training hours

The ABS data indicate that in 1994 there were 3174 private sector VET providers, of whom 1462 (46.1%) operated with training as their key activity while 1172 (53.9%) operated with training as one of their business activities. In terms of size (as measured by teaching hours) the study found that:

- half were *small* providers (that is, delivering less than 4000 participant hours in the 12-month period studied)
- 38 per cent were *medium*-size providers (that is, providing between 4000 and 40 000 participant hours)
- 11 per cent were *large* providers (that is, providing more than 40 000 hours)
- a greater proportion (68%) of *large* providers conducted commercial training as their main business activity than did medium or small providers

By contrast, in 1995 there were 606 TAFE providers (reported as 'training locations') all of which operated with training as their main activity. In terms of size (as measured by teaching hours):

- 17 per cent were *small*
- 25 per cent were *medium*
- 58 per cent were *large*

Staffing

In relation to numbers of staff employed by private providers and their characteristics, the 1994 ABS survey, as well as a paper prepared by Kell et al. in 1995, showed that:

- almost 13 000 employees (not differentiated on the basis of employment status) were employed by private providers to deliver commercial training courses in 1994 (ABS 1994)
- 40 per cent of private providers employ between two and five staff; 63 per cent had between two and ten staff (Kell et al. 1995)
- the majority of trainers employed by training organisations during 1994 (55%) were male (ABS 1994)
- training providers used their own employees more frequently than they employed external training consultants (ABS 1994)

By contrast, in 1995 there were approximately 19 000 full-time teaching staff employed by TAFE, contributing 55 per cent of total teaching hours (Fooks et al. 1997, p. 8).

Income

The survey highlighted the following in relation to private provider income:

- 54 per cent generate a proportion of their income from the Commonwealth Government and the relevant State governments
- the majority obtain income from fees charged to students
- 67 per cent have required capital to establish their businesses and 22 per cent of these have received this primarily from Commonwealth Government funding (Kell et al. 1995)

By contrast, Fooks et al. (1997, p. 9) in their critique of the TAFE sector show that, in the operation of this sector:

- approximately 64 per cent of funding was provided by State and Territory governments
- approximately 10 per cent was raised through fee-for-service delivery
- about four per cent was derived from student fees and charges
- some 20 per cent was provided by the Commonwealth Government

Course provision by public and private providers

It is only in the past three years or so that information has been compiled about the types of courses being delivered by public and private providers. While this information provides useful data, it lacks a context since there has been, to date, no overview of all aspects of course delivery on a provider basis.

This research review reveals that the information about available courses is limited because it does not take account of the scope and characteristics of the courses themselves. The courses ultimately serve to indicate the VET provision offered by the provider. Factors not given in descriptions of courses offered by public and private providers include:

- method of delivery
- extent to which self-paced and flexible delivery is utilised
- off-the-job provision as opposed to on-the-job provision

- the balance between theory and practice in the provision
- the significance of training versus vocational education
- provision of full-time as opposed to part-time study
- access and equity issues
- assessment instruments used

In other words, it is important to have a comparative picture which includes all components of the VET provision matrix and this has not been undertaken to date. Such an analysis would elucidate and clarify important differences between TAFE and non-TAFE providers, and between public and private provision.

Commercial providers offer training for a diverse range of occupations and industries. However, most provision is concentrated in the service sector, for example, business and secretarial, computing, tourism and hospitality, hairdressing and beauty, fashion and design and health and community services (ACPET 1992; Smith 1996). These providers also tend to offer training in the low resource areas of the service sector (Smith 1996), in contrast to private industry providers (associated with a specific industry) who appear to be more concentrated in the high resource and capital-intensive areas of manufacturing (Anderson 1994).

Where research by Smith (1996) and by the Australian Council for Private Education and Training (ACPET 1992) revealed commercial providers as delivering programs which were concentrated in the service sector, ABS research elaborated further and identified private sector training courses (by commercial as well as by other private providers) as being offered in five areas (in descending order of provision). As the list following indicates, the most training hours involved management and administration courses, and the least, sales and personal service courses:

- management and administration
- supervision
- general computing
- technical and para-professional
- sales and personal services (ABS 1994)

ABS data also revealed that the industries for which the greatest proportion of training was provided were manufacturing, finance, insurance, property and business services. The least amount of training was provided for personal and 'other services' industry.

Private provider categories

A number of researchers have studied the roles and functions of private providers on the basis of the four categories identified earlier—those of commercial, industry, enterprise and community provision. Most research takes as its focus the commercial providers—an example is provided in the next section: Comparative studies of public and private providers. In the remaining three types of provision, the most consistent and comprehensive research in this area has been undertaken by the National Centre for Vocational Education Research (NCVER) through a series of interlinked projects (Anderson 1993; Barnett & Wilson 1994; Barnett 1995).

Industry providers

Industry providers target a range of enterprises across an industry or industry sector and training is the central feature of the organisations. Consequently, their focus is most likely to be on training needs which are generic rather than enterprise specific. They are also more likely than enterprise providers to rely on government funding, particularly fee-for-service provision, to deliver training (Barnett 1995, p. 5).

Most VET training is provided at the equivalent of Australian Qualifications Framework (AQF) levels 1 to 3, but industry providers are more likely than enterprise providers to be delivering training at higher levels. Industry providers, like enterprise providers, employ external providers to deliver training, and these are most likely to be commercial providers (Barnett 1995, p. 21 and pp. 23–24).

Enterprise providers

Private providers are used less frequently than public providers by small firms, while medium-size firms tend to rely on a range of public and private external providers (Baker & Wooden 1995).

Research findings show that a key factor affecting the nature of enterprise training is that its providers, in contrast to other VET providers, operate in an environment where training is but one part of an overall program of operation (Barnett 1995; Smith 1996). Training within enterprises has been found to be widely accepted as part of the solution to deal with an increasingly competitive environment, but to be treated primarily as an operational rather than a strategic issue within enterprises, an enabler rather than a driver of strategy (CSU 1995a).

External training providers are generally employed by enterprises on an as-needs basis and are most likely to be commercial providers, individuals rather than training colleges, after which TAFE is the next most likely choice of external provider (Barnett 1995).

Community providers

National training reform has provided the adult community education (ACE) sector with the opportunity to take its place in the VET system as a provider of vocational programs and has been a powerful influence on the vocational program development of many community providers. In general, community providers have faced change of enormous magnitude as well as speed, involving choices to be made about future directions which challenge the sector's traditional identity and role.

As a result of national training reform, ACE providers are delivering vocational training on a for-profit basis, competing against other providers in the process. The implications of this trend in relation to the traditional identity of the sector which is essentially non-commercial, are not yet known. However, it would seem at this stage that a distinction will continue to be drawn between the sector's 'core business' and its for-profit training role (Barnett & Wilson 1994).

Comparative studies of public and private providers

To date, the most definitive comparative research in the area of public and private VET provision has been undertaken by Anderson (1993). His research involved detailed case studies of three matched pairs of commercial and TAFE colleges delivering training in business and secretarial studies, hospitality and tourism, and computer studies. A comparative analysis of the structure, operation and approach to training of these six providers revealed that the identified differences could be attributed to TAFE colleges having been shaped more by government policy and bureaucratic forces than by market forces. Commercial colleges, on the other hand, had been driven more by commercial influences.

In the context of growth factors and market forces shaping the direction pursued by each type of provider, Anderson found that the major driving forces for both sectors had been unemployment, the lack of new job opportunities and unmet demand for tertiary places. Differences occurred in the nature and extent of the impact of these factors on public and private providers due to the varying degrees of exposure to these forces experienced by providers in each sector.

In both sectors, growth factors were found to have stimulated changes in traditional client and program profiles, and to have diversified the sources of funding of each type of provider. This had produced a range of changes which Anderson identified as beginning a process of 'fundamental transformation in character and behaviour' (1993, pp. xiv–xvi). While some of these changes are specific to each sector, the following major trends were identified for both public and private providers:

- servicing of an increasingly diversified set of markets
- deriving funding from a wider range of sources

- moving up the academic hierarchy in response to market forces
- convergence in the training market with each assuming certain traits and patterns of behaviour normally associated with providers in the other sector

The Australian National Training Authority (ANTA) policy on user choice now makes this a reality.

VET provision in a competitive training market

Public versus private providers

A number of key national reports have predicted that training reform would result in TAFE providers being subject to greater competition from private sector providers (e.g. Deveson 1990; ESFC 1989).

Increased competition has seen TAFE broaden its program delivery with provision in newer areas such as business, office administration, and hospitality and tourism. As a result in these areas there is now a high concentration of private providers in direct competition with TAFE. These providers have been able to respond quickly to demand and have won business by offering clients a high probability of a job on completion of the course. However, in relation to market share, TAFE is the dominant provider, even though private providers have increased their share through competitive tendering (ACG 1994a; Anderson 1996).

Furthermore, in terms of relative positions in most segments of the training market, TAFE colleges continue to occupy the dominant position and also tend to operate in a broader set of markets than do private sector colleges (Anderson 1993). However, TAFE has lost market share to private providers (particularly to community providers whose infrastructure costs are lower) in the training component of labour market programs, off-the-job, entry-level training and migrant education (ACG 1994a).

Fooks et al. (1997) argue that for TAFE to be competitive in a training market, TAFE colleges need to be autonomous, an opinion which supports the widely held view of TAFE providers who believe that their lack of autonomy inhibits flexible responses to changing market demand (Anderson 1993).

Providers in the private VET sector have been found to operate within 'niche' markets (Anderson 1993; ACG 1994a), a way of operating which has enabled them to compete with TAFE in a less direct way. While there is considerable overlap between the market segments for which private sector providers compete (ACG 1994a), niche markets usually arise from gaps in public sector provision as a result of under-supply or non-provision. Rather than competing directly with TAFE, commercial colleges have addressed unmet demand, primarily from school leavers, thereby expanding the market for post-school training (Anderson 1993).

TAFE and commercial colleges compete directly in the following market segments:

- fee-for-service short courses
- labour market training programs
- traineeships
- international student programs (Anderson 1993)

TAFE providers, on the other hand, believe that ability to compete in a flexible and cost-effective manner is limited because of bureaucratic constraints which mean that private providers have advantages such as:

- greater flexibility and control of resources
- no restrictions on fee charging
- commercial independence and institutional autonomy
- access to accredited TAFE curriculum
- freedom from community service obligations (Anderson 1994)

However, encouraging new providers into the training market and widening the range of training providers offers the potential for cost-shifting, that is, the shifting of costs previously borne by one stakeholder to another. Training authorities in most States and Territories are attempting to prevent cost-shifting within their competitive tendering processes by specifying that the training for which funding is sought is additional to that which the tenderer usually provides. The progressive application of the Australian Vocational Education and Training Management Information System Standard (AVETMISS) to private providers may provide a means of checking cost-shifting but it is also important that other safeguards are developed (WADOT 1996, pp. 38–39).

Competitive tendering

In 1996, some $108 million was allocated by the Australian VET system for 'contestable' funding mechanisms with an expected increase to $153 million in 1997. The move to make increased use of competitive tendering processes reflects a trend across government generally to increase efficiency and effectiveness in both administration and program delivery (WADOT 1996).

During 1993–94 the amount of funds allocated for competitive tendering was small, representing one per cent of total recurrent funding. In Victoria and New South Wales competitive tendering for funds had been restricted to private providers, thus preventing TAFE from competing. In reviewing the extent of competition in the training market, ACG (1994a) found that only minimal pressure to compete with private providers had been exerted on TAFE because of the limited nature and extent of competition. The degree to which TAFE competed directly with private providers varied by State, depending on the commercial strategy of individual State training authorities. Where TAFE had been able to compete, mixed results were evident (ACG 1994a).

Preferred provider approach

A key disadvantage of competitive tendering is its highly resource-intensive nature, both for those bidding as well as for those assessing proposals. Several States and Territories have consequently considered moving to a 'preferred provider' approach which involves the purchaser approaching the provider to deliver a program, based on their acknowledged expertise as a provider (WADOT 1996).

The following advantages have been identified in relation to this strategy:

- reduction of administrative input
- reduction of costs to tenderers
- degree of continuity of funding to preferred providers thereby encouraging providers to plan for and invest in training provision, and facilitating capital planning (WADOT 1996)

However, a number of concerns relating to this approach have also been identified:

- new providers will have difficulty breaking into the market
- the approach is less transparent and more open to abuse, allowing for favourable treatment of some providers (WADOT 1996)

Conclusion

Collection of crucial information relating to competitive neutrality has recently commenced but this critical and so far little documented area requires ongoing monitoring—including feedback from user choice pilots. It also requires the development of a comprehensive and coherent research strategy in order to adequately inform future VET policy. Two potentially problematic areas in the open training market are those of cost-shifting from one stakeholder to another and the preferred provider approach to competitive neutrality.

Adoption of key components of national training reform by public and private providers

Research has focussed, to some extent, on the way in which public and private VET providers have adopted key components of national training reform, although findings to date are limited. Crucial components which have attracted research are:

- competency-based training
- accreditation of courses and registration of providers
- quality assurance
- recognition of prior learning
- promotion of access and equity

Competency-based training (CBT)

There has been limited research into the implementation of CBT in relation to public/private delivery of VET.

Non-TAFE providers have been found to be more likely than TAFE providers to be delivering competency-based programs. Of non-TAFE providers, the most likely to be providing CBT were found to be enterprise and industry providers, and the least likely to be community providers (CSU 1995b).

Private providers have commented adversely on the implementation of CBT and the standards associated with it, claiming that outcomes have not improved and benefits remain to be demonstrated. A range of structural barriers have been identified including accreditation difficulties, cross-subsidies, and lack of access to public infrastructure. The development and national endorsement of competency standards is supported by private enterprise-based providers but they perceive that the Australian Standards Framework adds limited value to enterprises (ACG 1994b).

Accreditation and registration of providers

It would appear that VET stakeholders agree that training providers who receive funding through competitive tendering processes should be registered to deliver accredited courses. Such a requirement would then offer a guaranteed minimum standard for the training delivered (WADOT 1996, p. 27). However, research to date indicates that the processes involved in obtaining accreditation present barriers for private and community providers. There has been no research identifying equivalent difficulties for TAFE providers.

Research has found that while private providers are supportive of provider registration and course accreditation as quality control strategies, they are extremely hostile to what they perceive as cumbersome, time-consuming, costly and complex procedures, and continual change in these procedures. These processes have also been found by researchers to be not well understood by these providers (Barnett 1995; ACG 1994b; Kell et al. 1995; Smith 1996). Removal of course accreditation requirements should therefore go a long way to removing these problems.

Other factors which prevent accreditation of private provider programs include the provider:

- not being interested in receiving accreditation
- being unaware of the procedures involved
- being unaware of the existence of an accreditation body
- not having ready access to information on accreditation (ABS 1994)

Community providers have also reported significant difficulties in relation to the accreditation process, particularly in relation to time, personnel and finances. While acknowledging the importance of accreditation, these providers have expressed reluctance about pursuing accreditation (Barnett & Wilson 1994).

Quality assurance

Research relating to the pursuit of quality by public and private VET providers can be divided into two main groups—studies examining the relationship between quality and accreditation and registration procedures, and studies examining the relationship between quality and competitive tendering. Again, the research is limited in the scope of its findings.

Accreditation is widely assumed to encourage and promote quality provision of training. Allen Consulting Group (1994a) identified a direct relationship between quality assurance and accreditation and registration procedures, but noted a lack of systematic effort to identify and implement quality issues in relation to assessment.

TAFE providers have indicated that quality had suffered as a result of competitive tendering, arguing that low prices quoted by private providers could only be achieved with a reduction in quality of the training delivered. However, private providers have expressed the belief that tendering documentation and processes demand quality and therefore, that they compete against TAFE on the basis of quality (ACG 1994a). The private provider view is endorsed by WADOT's study (1996) which found no evidence that quality was being undermined by competitive tendering processes. This was due to the development of monitoring processes designed to safeguard quality and also to the fact that the lowest price has not necessarily been the criterion driving the process.

Hall and Rimmer (1994) reviewed relevant international findings on the quality assurance implications of competitive tendering but found no clear consensus. They did find broad agreement that contracting draws attention to quality issues, but that there is a lack of comprehensive and comparable data about the impact on quality of competitive tendering.

It is extremely difficult to measure the efficiency or effectiveness of TAFE outcomes at the systems level because most TAFE quality assurance programs are administered primarily at the college level. This is a situation which inhibits consistency in the approach to quality processes and precludes comparability of quality outcomes (ACG 1994a).

Fooks et al. (1997) argue that quality assurance is pivotal to developing a client-responsive VET system and that setting sufficiently high standards of quality will encourage user confidence in VET. They propose that all providers seeking public funding for training should satisfy a set of national quality control standards, using a modified version of the model proposed by WADOT (1996).

(For further information in relation to quality issues, refer to chapter 11 by Paul Hager, 'Quality assurance in vocational education and training', in this book.)

Recognition of prior learning (RPL)

Examination of the research relating to RPL indicates that there exists concern among providers in regard to funding arrangements. The provision of RPL to students on entry to a course funded through competitive tendering, and which includes refund clauses, may result in reduced funding due to a decrease in delivered student contact hours. This acts as a disincentive to providers to implement RPL (WADOT 1996).

Research has found industry providers to be more likely to have made formal provision for RPL than enterprise providers, many of the latter being uncertain as to how to implement RPL (Barnett 1995).

Charles Sturt University (CSU 1995b) identified 58 per cent of TAFE courses as having implemented RPL provisions by 1994. A similar level of provision existed among non-TAFE providers, with 61 per cent having established RPL provisions within the same time frame. Differences within non-TAFE providers by type were identified, with community providers being much more likely than any other non-TAFE provider to have implemented RPL procedures. However, the non-TAFE providers surveyed were limited to a sample of 100, this small number indicating that these findings should be treated with caution.

Access and equity

The promotion through the national training reform of competition between training providers and the intended outcome of improved efficiency raises concerns about access and equity. These concerns focus on the possibility of equity being treated as an unwanted cost rather than a desirable outcome (Barnett 1993). Considerable research has been undertaken which reveals the VET system as one where women and other groups with special needs face a series of barriers which hinder their participation, and where their participation is characterised by a number of identified inequalities. This begs the question of whether a competitive training market will further entrench these inequalities (Barnett & Wilson 1995).

The tradition set by public policy—to concentrate access and equity responsibility within the public sector—has meant that the VET public sector has developed considerable knowledge and skills in addressing access and equity (Barnett & Wilson 1995).

Feedback from VET providers consulted by the Western Australian Department of Training (WADOT) research team demonstrated a willingness to provide courses to groups falling into the access and equity category. Generally, provision for these groups was regarded as more difficult due, for the most part, to their complex needs. Public providers expressed concern that they would be obliged to assume full responsibility leaving private providers in a position where they were able to focus on the 'easier' option of generic provision. The WADOT study identified the need for further investigation into the appropriateness of monetary and non-monetary incentives for providers to service groups with special needs, and for new funding models which can achieve equitable distribution of funds across all training systems (WADOT 1996, p. 43).

Conclusion

Research into the adoption by public and private providers of key components of national training reform reveals a number of omissions which should be addressed in future research. For example, in the area of CBT implementation by both public and private providers, investigation of incentives to encourage its wider adoption should be encouraged; while in the area of maintenance of standards and quality assurance, a number of measuring and monitoring processes needs to be established. Although RPL has been a feature of VET provision for many years, there are still many aspects of RPL which demand further investigation. However, it would appear from available documentation and the issues raised that one of the most pressing areas for further research and investigation relates to ensuring fair and equitable VET provision.

Findings and directions for further research

The research reviewed for this chapter has identified a number of omissions in existing research material relating to changes in the VET sector over the preceding decade. Such omissions highlight future directions for research into the VET sector. Furthermore, pre-emptive research into the newly emerging areas of VET provision will ensure a sound base for the establishment of initiatives in these areas. Ideally, the form and direction of future research should be designed so that it both informs and enhances the ongoing policy development process. A number of areas deserving of future research are suggested below.

The change in policy direction made explicit through the national training reform initiatives took place in a training context where little research or statistical evidence on the nature and operation of private provision and on the social and educational implications of altering the public–private balance by market-driven provision (Anderson 1994) had been conducted. It is only in the past five years or so—throughout the period of the implementation of these initiatives—that this knowledge gap has begun to be addressed. However, even so, it is apparent from this review that significantly more research is required in order to obtain a comprehensive and coherent view of the factors which influence the training market and, within this, of the most appropriate strategies to foster a dynamic balance between public and private provision of VET.

Data about private providers

The ongoing collection and updating of statistical information (the last major ABS collection being in 1994) relating to private providers is essential in ensuring that currency and relevance are maintained, particularly in a context where change takes place so rapidly. It is recommended that this data collection exercise be undertaken annually and be accessible through the national VET statistics. Such information will also prove invaluable to and inform the planning of future VET provision. Presently the research and available statistical information indicates a lack of data which would allow direct comparison between public and private providers.

VET outcomes

Most research related to public and private provision of VET has focussed on inputs rather than outcomes. Insufficient information exists (either nationally or at State/Territory level) to allow accurate comparison of providers' performance at the point of delivery (ACG 1994a; Anderson 1994). There is an absence of outcomes-related data for both TAFE and non-TAFE providers.

Relating course provision by providers to the context for delivery

From this research review it is apparent that the available information about courses is limited. It does not relate, for example, to the manner of delivery, the degree to which self-pacing and flexible delivery are involved, the impact of delivery within an institution as opposed to on the job, or the balance between theory and practice in delivery. Nor does it look at the notion of vocational education as opposed to training, the provision made for full-time as opposed to part-time study, access and equity provisions, or the type of assessment techniques involved.

It is crucial that information relating to the scope, characteristics and contents of available VET courses is collected comprehensively and collated so that a coherent and comparative matrix of VET provision is constructed which takes account of all providers and their characteristics.

A research project of this nature, while of significant magnitude, is an essential tool in facilitating an analysis of the Australian training market. Furthermore it would assist in elaborating the important differences existing between TAFE and non-TAFE providers and between public and private provision.

Competitive tendering

The research has highlighted the need to document the full implications and costs and benefits of competitive tendering. Recent evaluation of pilot activities suggests that competitive processes can operate effectively to produce enhanced flexibility and responsiveness and can achieve positive cultural change within TAFE institutions (WADOT 1996, p. 6).

There is also a need for research which can provide information on:

- how to maximise the benefits and minimise negative consequences of competitive tendering processes
- the full implications of competitive tendering for providers, students and industry
- the full cost of delivering training in TAFE in order to undertake a cost–benefit analysis of competitive tendering (WADOT 1996, pp. 44–48)

The preferred provider approach

Since this approach is relatively new, it is recommended that further monitoring of the outcomes of the preferred provider strategy be undertaken before clear conclusions can be drawn about its ability to enhance competitive neutrality.

Cost-shifting

Although cost-shifting, a new concept in training provision, has been identified in several studies as a potential difficulty associated with the implementation of a competitive training market, there is a need for specific research to be undertaken to verify and quantify this.

Competitive neutrality

Collection of crucial information relating to competitive neutrality has recently commenced. However this critical, and so far little documented, area requires ongoing monitoring, as well as the development of a comprehensive and coherent research strategy which can be applied to adequately inform future VET policy. The preceding areas of competitive tendering, preferred provider and cost-shifting would provide critical input to research on competitive neutrality.

Feedback from the 'user choice' pilots will be critical in complementing existing knowledge on promoting competitive neutrality and increasing understanding generally about the operation of the training market.

Competency-based training

A need for further research to inform the development of policy relating to the implementation of CBT by different types of providers has been identified. An investigation into the incentives necessary to encourage a wider adoption of CBT and associated standards processes is also recommended.

Quality

There is a need for research which can measure quality outcomes and relate these to the inputs of particular providers. Current research regarding the attainment of quality in VET delivery on the basis of provider type is based on the opinions of stakeholders from different sectors and, for this reason, little agreement exists. Research and analysis involving independent measurement of outcomes in a context of accepted indicators of quality and taking account of all relevant sectors and stakeholders is without question an urgent priority in this area.

Assessment and RPL

This review has demonstrated that there is a lack of research relating to RPL in particular, and assessment generally. Current research indicates that the implementation of RPL varies from provider to provider. It may, however, be equally useful to gather information from across the assessment spectrum with particular emphasis on the implementation of assessment techniques by private providers. Information should also be offered on the factors which act as incentives and disincentives to providing assessment which meets quality standards and which is consumer focussed.

Access and equity

The chapter has demonstrated the need for research which explores the appropriateness of monetary and non-monetary incentives to providers to service groups with special needs and for the development of alternative funding models which can achieve equitable distribution of funds across all training systems (WADOT 1996, p. 43).

Also revealed through this review was the absence of research detailing audits of access and equity incentives and similar provisions made in tender briefs, as indeed was any analysis of the ways in which access and equity considerations have been addressed in competitive tendering processes. Future analysis in this area should be confined to funders and providers of VET. Any study of impact on consumers should be undertaken as a separate exercise.

Also identified was a need for research designed to develop a mechanism for the separate costing and funding of community service obligations (CSOs) (Maglen & Selby Smith 1995). A project of this nature would also involve an analysis of the components of the additional costs involved in meeting CSOs, how to measure them and what they mean in dollar terms (Butterworth 1995, p. 58).

References

ABS (Australian Bureau of Statistics) 1994, *Commercial training providers Australia*, ABS Catalogue no. 6352.

ACG (Allen Consulting Group) 1994a, *Establishing an effective training market*, Office of Training and Further Education, Victoria.

—— —— 1994b, *Successful reform: Competitive skills for Australians and Australian enterprises*, ANTA, Brisbane.

ACPET (Australian Council of Private Education and Training) 1992, *The ACPET national survey: Report to the ITP Steering Committee*, ACPET, Canberra.

Anderson, D 1993, *Blurring the boundaries*, NCVER, Adelaide.

—— —— 1994, *Private training providers in Australia: Charting the terrain*, paper presented at Training Research in University and TAFE conference, NCVER–James Cook, Townsville, July 6–8.

—— —— 1995, 'Private training provision in Australia: An overview of recent research', in *Economics of education and training*, eds F Ferrier & C Selby Smith, AGPS, Canberra.

—— —— 1996, 'The training market reforms and their impact on the vocational education and training system', in *Economics of education and training*, eds F Ferrier & C Selby Smith.

Baker, M & Wooden, M 1995, *Small and medium-sized enterprises and vocational education and training*, monograph series 1, National Training Market Research Centre, Adelaide.

Barnett, K 1993, *Swings and roundabouts: The open training market and women's participation in TAFE*, NCVER, Adelaide.

—— —— 1995, *Australian industry and enterprise training providers*, NCVER, Adelaide.

—— —— & Wilson, S 1994, *Challenges and choices: A study of four providers of adult community education*, NCVER, Adelaide.

—— —— & Wilson, S 1995, *Separate responsibilities: A comparative, equity-focused study of commercial and community training providers*, AGPS, Canberra.

Butterworth, P 1995, 'Some new challenges for researchers in vocational education and training', paper presented to No Limits To Learning, Adult Learners' Week Conference, Coogee, NSW, September, pp. 56–63.

CSU (Charles Sturt University) 1995a, *Enterprise training: The factors that affect demand*, Office of Training and Further Education, Victoria and ANTA.

—— ——1995b, *The availability of competency-based training in TAFE and non-TAFE settings in 1994*, AGPS, Canberra.

DEET (Department of Employment, Education and Training) 1992, *Intersectoral education and training statistics: A discussion paper on the availability and consistency of basic statistical information across schools, TAFE, higher education and accredited private providers*, DEET, Canberra.

Deveson 1990, (see Training Costs Review Committee).

ESFC (Employment Skills Formation Council) 1989, *Industry training in Australia: The need for change.*

Fooks, D, Ryan, R & Schofield, K 1997, *Making TAFE competitive*, Australian College of Education, Canberra.

Hall, C & Rimmer, S 1994, 'Performance monitoring and public sector contracting', *Australian Journal of Public Administration*, vol. 53, no. 4.

Kell, P, Balatti, J & Muspratt, S 1995, 'Private training in North Queensland', prepared for the 4th International Literacy and Education Research Conference on Learning, Townsville, 29 June–2 July.

Maglen, L & Selby Smith, C 1995, 'Pricing options in NSW TAFE', in *Economics of education and training*, eds F Ferrier and C Selby Smith, AGPS, Canberra, pp. 70–80.

OECD (Organisation for Economic Co-operation and Development) 1991, *Alternatives to universities*, Paris, OECD.

Smith, E 1996, 'Non-TAFE providers in the training market', *The Australian TAFE Teacher*, April, vol. 30, no. 1, pp. 32–35.

Training Costs Review Committee 1990, *Training costs of award restructuring*, (Deveson report), vols. 1 and 2, AGPS, Canberra.

WADOT (Western Australian Department of Training) 1996, *Developing the training market: Issues and best practice arising from State/Territory pilot activities.*

9 Flexible delivery of training*

Peter Kearns

Context

Flexible delivery of training has been one of the main policy thrusts associated with training reform in Australia throughout the 1990s. This has led to significant funding of research on flexible delivery by government agencies directed, in the main, towards identifying models and strategies for effective implementation of flexible delivery.

In this context of evolving training reform, this chapter reviews research on flexible delivery of training in the period since 1990 with a view to identifying the main conclusions that can be drawn from this body of research, the adequacy of research, and gaps that exist.

Policy framework

The overall orientation of research on flexible delivery throughout this period has been conditioned by the evolving policy framework for flexible delivery in vocational education and training (VET) established by national and State agencies to give effect to the view that flexible delivery is a necessary component of training reform.

---

* This chapter is a reprint of Kearns, P 1997, *Flexible delivery of training*, Review of research, National Centre for Vocational Education Research, Adelaide.

In the first half of the decade the pioneering work of the Flexible Delivery Working Party established by the national Vocational Education Employment and Training Committee (VEETAC) in 1991 set general directions for flexible delivery. These were enunciated in the 1992 report *Flexible delivery in TAFE: A national framework for implementation*.

From the middle of the decade, with the abolition of the Flexible Delivery Working Party, the Australian National Training Authority (ANTA) has sought to promote a more strategic approach to flexible delivery linked to the main policy thrusts of training reform. This strategic orientation is reflected in the 1996 final report of the ANTA National Flexible Delivery Taskforce which recommended a five-year medium-term strategy for action. Related research has explored flexible delivery in the context of moves towards a client-focussed, demand-driven VET system with user choice a central feature (Coopers & Lybrand 1996).

Evolving and shifting concept

The concept of flexible delivery has been defined throughout the period under review in ways that reflect a number of the learner-centred attributes of an open learning philosophy (Johnson 1990). This is evident in the definition of flexible delivery adopted by the Flexible Delivery Working Party in its 1992 national framework.

While the ANTA 1996 National Flexible Delivery Taskforce carried over much of this client-focussed approach in its definition of principles for flexible delivery (ANTA 1996, pp. 33–36), the taskforce also defined the concept in terms of user choice, client–provider relationships, and the operation of effective training markets.

This re-focussing of the concept reflects the shift from a supply-side orientation evident in the 1992 national framework with its provider focus to a demand-side, industry-led view of VET. A consequence is that there has been a certain lack of clarity in the use of terms throughout the period that is reflected in the literature.

For much of the period, the terms flexible delivery and open learning have been used as though they were synonymous (see, for example, Kearns & Johnson 1993b). While the term flexible learning has gained currency (and is common overseas), this is less reflected in policy statements and in research. The dynamic context of change and policy shifts has posed issues for research in responding to emerging and shifting requirements.

The developments discussed above reflect tensions between educational objectives reflected in open learning and the economic/ efficiency objectives driving the philosophy of competitive training markets. Up to now, research has not yet focussed on balancing and reconciling these differing yet complementary perspectives in a context of growing imperatives for lifelong learning. There are key research issues relating to objectives and performance measures which relate to tensions between the educational, moral, and social obligations of the sector and pragmatism in furthering economic/ efficiency goals.

Orientation of research

Much of the research undertaken throughout the 1990s has focussed on the interests of the sponsoring government agencies. There has tended to be an orientation towards pilot projects, often case studies, of the 'what works' character. In the initial phase up to 1996, this research was oriented towards producing practical guidelines for flexible delivery.

The recent action by ANTA to promote flexible delivery can be seen as denoting a more strategic phase of implementation, although it is arguable whether research has yet caught up with the more holistic requirements of such an integrated approach. Issues involved in the systemic implementation of flexible delivery are discussed in some studies (FDWP 1992; Smith et al. 1996; Spark et al. 1995; ANTA 1996). Comment on some of the present gaps and needs follows.

Methods and strategies

Since 1990, there has been considerable experiment in developing and adapting flexible delivery methods and strategies to the needs of various client groups, in particular in off-campus situations. While a wide range of models has emerged, the key themes in this period relate to:

- growing sophistication in the use of distance education strategies for various client groups including the use of mixed-mode and multi-mode models
- the increased importance of modern learning technologies
- attempts to find models for effective learner support in various flexible delivery contexts

These themes have converged in the increased use of learning technologies in distance education accompanied by a search for effective approaches to learner support.

Developments during this period, such as the establishment of the Open Learning Technology Corporation, have fostered inquiry into the role, costs, and benefits of learning technologies. While there has been a growing diversification in VET delivery methods, this trend co-exists with the continued dominance of face-to-face teaching (see Smith et al. 1996 for the Queensland situation).

Spark et al. examined the implications of the new converging and inter-connected technological systems which were making possible an expanded curriculum, greater access to information and new forms of communication (Spark et al. 1995). While the implications of these trends for education and training were seen as major and radical, this study also concluded from a survey undertaken that providers were not currently heavy or innovative users of existing technologies (Spark et al. 1995, p. 65). On the other hand, an evaluation by McLoughlin of the technologies and services of the Western Australian TAFE Media Network found that the use by technical and further education (TAFE) of advanced technologies for teaching/learning and administration was effective and wide ranging, with both students and staff indicating satisfaction (McLoughlin 1996).

The survey of Victorian institutions showed a widespread use of conventional technologies such as audio and video, but often not to their full potential. Computer-based training and computer-managed learning, teleconferencing, video and audio were the most widely used technologies with significant variations in use between industry sectors (Spark et al. 1995, pp. 16–17). Similarly, Smith et al. concluded that pedagogy in Queensland institutions is highly varied with a wide range of approaches (Smith et al. 1996, p. 48).

The broader social, economic and educational implications of the new information technologies have attracted considerable attention in Europe and elsewhere, including work undertaken by the European Commission (EC) on implications of the information society (EC 1996). A recent EC study stressed the significance of the learning aspects of an 'information society' in fostering congruence between the technological, economic, and social dimensions.

A study by Mitchell and Bluer in Victoria directed at new learning technologies developed a planning model for innovation in this area. This study, which followed up on the work of Spark et al., concluded that there was not a strong emphasis on learning as the chief criteria for using technology in Australian studies (Mitchell & Bluer 1997). This was reflected in the fact that these consultants found it difficult to find eight illuminating case studies.

The developments in Victoria cited above illustrate the progress towards a more strategic phase in using modern learning technologies focussed on addressing the barriers to the use of technologies identified in the Victorian studies and other studies.

The value of these technologies in addressing particular needs emerges from a number of studies. Anderson et al. (1995)

concluded, from a study of non-English-speaking-background (NESB) distance learning students, that there was a high potential for enhancing delivery and content using new technology to support distance learners. Case studies of particular groups demonstrate this potential (Kearns et al. 1996; Kearns & Johnson 1993a; Cheshire 1994).

Developments in traditional distance education methods include the use of various multi-media combinations (McLoughlin 1996; Kearns & Johnson 1993b; Kearns et al. 1996; Dobbs 1996). The value of linking satellite delivery to traditional print-based methods has been shown in these studies. The increasing use and significance of multi-media approaches, including the role of Internet, is a key conclusion (Whittingham 1994).

A further major advance in flexibility in education and training provision has been the growing popularity of mixed-mode approaches both in VET and higher education (Lawson 1997; Taylor & White 1991; Taylor et al. 1993). These studies show that mixed-mode offers more choice to students, is popular with students and is cost effective (Taylor et al. 1993).

There is currently exploration, both in Australia and overseas, of the potential of Internet for delivery of training. This illustrates the shifting frontier of innovation that has characterised the role and uses of learning technologies throughout this decade (Miller 1995).

While there has been a number of pilot studies, Internet has not yet been widely applied in training delivery, and a broad spectrum of issues for research remain. Assessments such as that by Miller point to the potential value of Internet for VET provision (see also Rutherford 1996; Shore 1996). The potential of Internet for the internationalisation of VET is a significant area for enquiry. Issues to be examined include the design of materials, security, enrolment questions and record-keeping.

Access and learner support

A broad spectrum of issues has been identified throughout this period in providing learner support to students in off-campus situations. The very success of access strategies has highlighted the need to provide support to students distant from providers (FDWP 1992; NFDT 1997; Carter 1997).

A variety of approaches to providing learner support has been adopted. These include learning support centres in various guises (open learning access centres, open learning centres, Oz access centres, flexi-learn centres). While case studies of the role of such centres have generally been positive, the ANTA Flexible Delivery Task Force concluded that limited access to quality learning support remained a major barrier to flexible delivery (NFDT 1997, p. 20, p. 53). This is in a context where Anderson et al. have identified a high potential for modern learning technologies in providing learner support (1995, p. 65). A study by Carter found that students often did not take advantage of the available Open Training and Education Network (OTEN) counselling service for distance education learners (Carter 1997, p. 20). A combination of study and home factors often led to withdrawal from distance education programs (James 1996).

Learning effectiveness

A relatively neglected aspect of research on flexible delivery has been the merits of various flexible delivery methods and traditional methods of VET provision in terms of learning outcomes. In the context of the growing pressures for lifelong learning which were emphasised in the 1996 report to the United Nations Educational and Scientific Cultural Organisation (UNESCO) of the International Commission on Education for the 21st Century (Delors et al. 1996) and the report of the 1996 meeting of Organisation for Economic Co-operation and Development (OECD) Education Ministers (OECD 1996), this is a significant area of neglect.

Misko undertook a review of research on learning styles in 1994 and concluded that there was a strong need to conduct more learning style research (Misko 1994). A particular need was seen as research which synthesised and integrated the various learning styles as a basis for practical applications in delivery strategies. The complexity of customising training to individual learning styles was noted by Misko. Mitchell and Bluer also found inadequate research on learning outcomes of the use of modern technologies (Mitchell & Bluer 1997).

A particular area of neglect in VET research with the trend towards internationalisation of education and training has been the influence of cultural factors on learning styles and delivery strategies in various cultural contexts. Again, the principal need is for research which synthesises and relates to VET contexts findings from various disciplines such as psychology, sociology and socio-linguistics. Dissemination of research findings in formats such as resource guides remains a need. Ways in which VET provision needs to be acculturalised for flexible delivery in various international contexts, in Australia and overseas, is a significant emerging need for research.

Research in America, England and Germany has paid more attention to integrating the findings of cognitive science on adult learning with strategies for skill formation (see for example Hannun 1990; Thomas 1995; Federal Institute for Vocational Training 1991). This interest has led to methods such as the German LEITTEXTE system which emphasises the self-reliant learner. In America, Hannun is typical in emphasising the need to integrate the use of modern learning technologies with knowledge of adult learning principles (Hannun 1990).

The neglect of learning aspects of flexible delivery is recognised by the ANTA 1996 Task Force in its report:

> *Education and training providers have not fully developed teaching and learning strategies and structures which fully utilise new approaches.*
>
> (ANTA 1996, p. 37)

One of the key gaps in research lies in integrating findings from cognitive science on adult learning with alternative flexible delivery strategies and outcomes to provide a basis for more integrated, holistic reform.

Responding to special needs in access

A central feature of the role of flexible delivery strategies since 1990 has been their value in addressing special needs for access to VET. The disadvantaged groups addressed by such strategies have included people in remote locations, people with disabilities and literacy needs, Aboriginal people, and some groups of women. While a wide range of pilot studies has demonstrated strategies that work, the extent to which such strategies have been generally applied and mainstreamed is less well documented in research.

The growing sophistication of distance education methods with multi-media approaches and the harnessing of technologies such as satellite delivery have facilitated access for people in remote locations (Kearns & Johnson 1993a; Drummond 1993; Seemann et al. 1996). In some cases, pilot projects have addressed special needs in remote locations; as, for example, with Aboriginal people and literacy needs (Drummond 1993; Seemann et al. 1996) and have experimented with new technologies such as the Internet. The needs of geographically dispersed industries, such as the wine industry, have been addressed by multi-media strategies (Kearns et al. 1996).

The potential of flexible delivery and open learning methods to facilitate access for people with disabilities was evaluated in a study by Kearns and Johnson (Kearns & Johnson 1993b). This study concluded that these methods had substantial potential to improve access for people with disabilities. A range of issues and barriers was also identified.

Adaptive technology surveys undertaken by the Open Training and Education Network (OTEN) in respect of people with a physical disability showed how technologies were being adapted to cater for various forms of disability (OTEN 1995b). A follow-up survey in 1996 examined adaptive technologies for people with intellectual, neurological or specific learning disabilities (OTEN 1996). While case studies such as those by Kearns and Johnson demonstrate the potential of these technologies to facilitate access by people with disabilities, the extent of use of these methods is less well documented. A study by Radcliffe highlighted that TAFE teachers were poorly prepared to deal with students with disabilities in their classes (Radcliffe 1989). Methods such as FlexiModel have been used to provide greater flexibility in adapting to the needs of these students (Boote 1996). While the considerable value of flexible delivery methods for students with disabilities has been established, the extent of use needs ongoing monitoring.

Meeting language and literacy needs is a further area where there has been considerable experiment in adopting flexible delivery methods, in particular for workplace delivery under programs such as WELL (Workplace English Language and Literacy program). The major potential of flexible delivery strategies using new technologies to provide for NESB students in remote locations was reported by Anderson et al. in 1995. Strategic planning in this area recognises the value of flexible delivery strategies. The Department of Employment, Education and Training (DEET) strategic plan includes an annotated bibliography (DEET 1995).

Providing for the needs of Aboriginal people through flexible delivery methods is another field where there has been significant innovation, in particular in adapting distance education methods for Aboriginal communities in remote locations. A study by Brennan in both urban and remote communities developed a best practice model based on flexible delivery methods (Brennan 1996).

An interesting feature of some research in this area has been the concern to adapt delivery strategies to the cultural values of Aboriginal peoples so that there has been a focus on the influence of culture on learning styles (Seemann et al. 1996). Some Australian Vocational Training System (AVTS) pilot projects involving

Aboriginal people have also examined the influence of culture on learning styles and preferences (Kearns et al. 1996).

A further area where flexible delivery strategies have facilitated access has been for certain groups of women. A study by Kearns and Cotterill of access by women in operative-level jobs in six industries showed how flexible delivery strategies linked to concepts of a high performance workplace were facilitating access, in particular in the trade exposed manufacturing sectors studied (Kearns & Cotterill 1996).

Less use of such methods was found in the service sectors studied. A study of open learning for women in small business is still in an early stage of development. The available research suggests substantial value in flexible delivery methods meeting the distinctive needs of women, in particular those with family responsibilities.

Overall, the role and value of flexible delivery methods in facilitating access has been well documented in research. Less is known about the extent of use of such strategies.

Flexible delivery in industry

The growing interest in flexible delivery in enterprises within industry over the period under review is reflected in a range of projects testing approaches to workplace provision of training, often under partnership arrangements.

A study on the benefits to industry of the adoption of flexible delivery methods was undertaken by Kearns and Johnson for the Flexible Delivery Working Party in 1992 (Kearns & Johnson 1993a). This study pointed to a range of benefits and models but also reported significant barriers. These included attitudinal barriers (in both training providers and enterprises), insufficient awareness of benefits, insufficient development of key brokerage roles, segmented development of learning materials, barriers in the small business sector, and cost factors. At the same time, case studies in the report documented a range of innovation in delivery strategies, mainly in larger firms.

Subsequent studies have documented emerging good practice in a range of industries. Key developments have included the development of industry–education partnership strategies and the use of flexible delivery strategies to address the training needs of firms in remote locations. Provision of training in small firms has remained a problem despite some interesting innovations.

Examples of flexible delivery methods to service industry in remote locations include the Pilbara Video Conference Project (Davy 1990). This adopted interactive electronic technologies and projects which adapted satellite delivery in Queensland to staff training for hospitality staff in remote island locations and to local government staff across Queensland (Kearns & Johnson 1993a). These were seen as effective uses of flexible delivery methods.

Industry/education partnerships development has been a natural consequence of flexible delivery strategies to provide workplace training.

Such partnership development was given a stimulus by the pilot phase of development of the Australian Vocational Training System (AVTS) in 1993–1994. Case studies undertaken by Kearns et al. in 1995 showed a range of partnership models across Australia, many of which used flexible delivery strategies. In a few cases, such as a Victorian wine industry project, flexible delivery methods had been applied to a network of small firms (Kearns et al. 1996).

While a significant number of cases exist where flexible delivery methods have been applied in medium-sized and small firms, provision in small firms has remained a problem area and strategies identified in research such as networking strategies appear to have been applied less than might have been expected (ANTA 1996, pp. 34–36). However, a study by Henneker is exploring on-line access for small to medium-sized enterprise (SME) networks of firms while a study of open learning for women in small business by Hope is in an early stage of development.

The distinctive requirements of various industry sectors for flexible delivery have been studied. A study by Parker and Williams (1996) in the recreation and retail industries recommended a strategic framework of practice for industry-led flexible delivery of training. Study of the use of flexible delivery by the NSW State Rail Authority, for handsignallers and worksite supervisors combining satellite delivery and self-paced learning, showed this method to be highly cost effective in reducing training time from six months to eighty days (Fullarton 1996).

The application of action learning methods has pointed to the value of team methods in fostering ownership and commitment in the provision of training off-campus to industry (NSDC 1996).

The application of flexible delivery strategies in industry training has been limited by general attitudes to work-based training in industry. A study by Misko showed that formal work-based training was not widespread in the majority of Australian companies. This is particularly the case in small firms where the emphasis is on informal on-the-job practical training (Misko 1996). The Misko study also reported the cost-effectiveness of work-based learning, while also lamenting the dearth of studies which address the costs and benefits of work-based training.

The change in focus

Staff development needs

A persistent theme in the literature is that adopting a client focus rather than a system focus represents a major culture change for TAFE and other providers. Consequently, staff development to support flexible delivery has been regarded as a key strategy to bring about the necessary cultural change in VET. This was regarded as a central goal of the 1992 National Framework for Implementation in TAFE with staff development seen as the necessary strategy to bring about attitudinal change in VET teachers and to foster necessary knowledge and skills.

This objective has been supported by the work of the National Staff Development Committee (NSDC), and its predecessor body, with its orientation towards promoting a learning paradigm for staff development (Kearns & Schofield 1997). This approach led to the promotion by the committee of learning strategies such as action learning (NSDC 1996) and team approaches to management development which are well suited to flexible delivery strategies.

A number of projects have shown the value of action learning models for staff development in fostering understanding of flexible delivery among staff (NSDC 1996) and this approach was re-affirmed in the 1996 report of the ANTA National Flexible Delivery Taskforce. A Western Australian study by the Department of Training showed that open learning modules could be effective in orientating new staff to flexible delivery, while for more experienced staff a co-ordinated strategy was crucial (Department of Training 1995).

A study by Taylor and White of multi-media and mixed-mode teaching and learning in higher education showed the clear preference of staff for traditional face-to-face teaching while students also preferred a face-to-face mode while favouring a mixed mode (Taylor & White 1991, p. 36). However, some studies have shown substantial staff satisfaction with flexible delivery methods when soundly applied (Lawson 1997; Baron et al. 1995; Smith et al. 1996).

The conservatism of many staff in terms of their perception of their role is documented in overseas studies as well as in Australia (Thomas 1995).

A study by Smith et al. of flexible delivery in Queensland TAFE showed a widespread concern among staff that the push for flexible delivery was an economic rationalist technique rather than a pedagogical strategy (Smith et al. 1996, p. 92). This perception generated some fear and frustration among staff. This study concluded that two cultures of pedagogy existed side by side: one of industry and commerce and one of teaching and learning (Smith et al. 1996, pp. 6–7). There was a need to create processes that enabled the two cultures to coincide more fully.

While a range of effective staff development models have been identified, further research is needed on the use and outcomes of staff development strategies directed at cultural change and attitudinal shifts in the broader context of overall change strategies. Few institutional longitudinal studies exist along the lines of the Tea Tree Gully study (Baron et al. 1995). There would be considerable value in a comparative study of a range of institutional case studies across Australia. This should be directed at analysis of the outcomes of strategies for cultural change in VET towards more flexible, client-focussed systems which integrated the two cultures of pedagogy identified by Smith.

Barriers and issues

Barriers to the more widespread adoption of flexible delivery have been identified in various studies (Kearns & Johnson 1993a, 1993b; Widdowson et al. 1992; FDWP 1992; Smith et al. 1996; ANTA 1996). The ANTA National Flexible Delivery Taskforce in its 1996 report emphasised the absence of a shared national focus, inappropriate resource allocation models, information deficiencies, inadequate learner support, work practices as barriers, and problems in customising. Smith et al. in their study of Queensland TAFE identified a range of administrative and organisational barriers which led to considerable frustration among staff. In addition to these barriers, Kearns and Johnson emphasised attitudinal and cultural barriers including traditional views of the teaching role (Kearns & Johnson 1993b, p. 24). A key research task now is to monitor at all levels the impact of strategies that address these barriers.

Industrial relations issues relating to teaching awards and industrial and work practices were identified in the report of the ANTA Taskforce as barriers impeding flexibility in the work of VET.

ANTA recognised its limited influence in this area where State agencies have a key role. Issues relating to work practices need to be examined in the context of strategies for managing change.

Other factors which impede more flexible approaches include rigid organisational structures which modulate against flexible approaches and course and program design methods (including assessment strategies) which are not responsive to flexible delivery.

While good practice principles have been identified (Palmieri et al. 1995), there has been little research to date on quality assurance outcomes in the emerging client-focussed demand-driven VET system. Smith et al. summarise the quality issues in the emerging context of VET (Smith et al. 1996, pp. 50–58).

Student attitudes to flexible delivery also require further study in the context of growing imperatives for lifelong learning. Baron, Thiele and Hintz concluded from their evaluation of Tea Tree Gully college that further research could examine more closely factors of age, gender, and motivation among students in relation to flexible delivery (Baron et al. 1995). On the other hand, Kearns and Cotterill (1996) found that women in operative-level jobs responded positively to open learning methods, in particular in the manufacturing sectors studied, when these were aligned with empowerment strategies in work organisation and management. Smith et al. found that staff were, on the whole, supportive of flexible delivery.

Managing change

Research on the implementation of flexible delivery since 1990 has shown that managing change is complex and difficult so that progress towards a widespread systemic implementation of flexible delivery has been slower than would have been expected in 1992.

Smith et al. point to some of the reasons:

> *Such a shift to new modes of teaching and learning is complex and changes are required at all levels of the TAFE organisation.*
>
> (Smith et al. 1996, p. 10)

The study by Smith et al. of flexible delivery in Queensland TAFE showed considerable uncertainty and frustration among staff in the change process (Smith et al. 1996, pp. 53–55). Mitchell and Bluer in their study of new learning technologies emphasised issues arising from the pace of change and resulting complexity (Mitchell & Bluer 1997).

Other barriers discussed above continue to impede a wider use of flexible delivery. There is a need for ongoing research monitoring of the outcomes of change strategies at all levels. Such monitoring should include the impact of the new training package approach. There have been few longitudinal studies to date of the change process so that there are grounds for regarding this as a research priority. The planning model developed by Mitchell and Bluer for new learning technologies requires evaluation and testing in operation.

Cost and benefits

The available research suggests the general cost-effectiveness of flexible delivery methods when these are examined over an appropriate period of time. However, the diversity of flexible delivery methods means that cost/benefit aspects need to be examined in relation to specific methods.

A study by Lawson of mixed-mode delivery of an advanced certificate in urban horticulture found evidence of significant benefits for students and staff. These included high levels of student satisfaction, as well as more efficient use of college facilities, although comparisons of traditional and flexible methods remained difficult (Lawson 1997). However, studies of mixed-mode provision in higher education show that mixed-mode is more cost effective than traditional face-to-face teaching, or at least competitive. Student attitudes have generally been positive to the benefits of flexible delivery. A study by OTEN found that students enrolled with OTEN because of the flexibility offered (OTEN 1995b, p. 29).

Torrens Valley Institute of TAFE also found student satisfaction with flexible delivery while the study of costs found that productivity compared favourably with the average productivity of South Australian TAFE (Baron et al. 1995). However, Mitchell and Bluer (1997) concluded that there were very few detailed research studies giving accurate costs for production and distribution of multi-media materials.

A significant area requiring further development relates to the role of performance and productivity measures in monitoring the outcomes of alternative delivery strategies. While the Australian Vocational Education and Training Management Information System (AVETMIS) standard includes information on delivery mode, data collection systems in some States are not yet able to provide the required data. When all States are able to report to the AVETMIS standard, more sophisticated analysis will be able to be undertaken in this area.

The general requirements identified by Guthrie in his 1988 and 1991 studies of performance indicators remain valid at all levels (Guthrie 1988, 1991). A balanced set of performance indicators could contribute much in furthering the reconciliation of economic efficiency, educational, social and moral aspects of alternative delivery strategies in the work of VET.

There is a continuing need for cost-benefit studies in respect to specific flexible delivery methods, in particular looking at innovative strategies for workplace provision of training.

Findings and directions for further research

The existing body of research documents discrete methods and strategies for flexible delivery that are effective in a range of particular contexts. However, flexible delivery now appears to be entering a further stage of development with the ANTA five-year medium-term strategy which has a more strategic orientation towards integrating flexible delivery with the other principal thrusts of training reform. It is also likely that this new phase will be featured by more extensive and innovative use of new learning technologies.

This new phase, with a move to a more systemic implementation of flexible delivery, throws up a broad spectrum of research issues. These relate, in particular, to managing change so as to achieve the objectives of flexible delivery, and of training reform more generally, in an emerging context of rapid change requiring lifelong learning in work and in society. This will need a more strategic and integrated approach to research, in which the current gaps in learning aspects of flexible delivery should be addressed.

If reform is envisaged as an organic, developmental process (Committee on the Federal Role in Education Research 1992, p. 15), the research role in this process of learning is critical. Such a research program should support a more holistic approach to the provision of VET, in diverse contexts of lifelong learning, in which there is congruence between technology, economic requirements for skill, and the human face of learning. Relating flexible delivery to the fostering of a learning culture in VET should be a central focus of research in the emerging conditions of the 21st century.

References

Anderson, M, Nicholson, A, Bailey, L 1995, *New technology and curriculum design: A research project with NESB distance learning students*, National Centre for English Language Teaching and Research, Sydney.

ANTA (Australian National Training Authority) 1996, *National Flexible Delivery Taskforce: Final report*, ANTA, Brisbane.

Baron, J, Thiele, D & Hintz, E 1995, *Following the yellow brick road: Implementation and evaluation of flexible learning systems at Tea Tree Gully Campus of Torrens Valley Institute of TAFE*, NCVER, 1995.

Boote, J 1996, 'Increasing access through flexible delivery: A case study', *Training Agenda*, August 1996.

Brennan, J 1996, 'Open learning/flexible delivery: Implications for Aboriginal students concerning their attitudes towards education and the resulting educational outcomes', unpublished.

Carter, C 1997, *Counselling distance learners: Preferred support strategies for social and personal difficulties*, OTEN, Sydney.

Cheshire, C 1994, 'College of no classrooms,' in *Australian Training Review*, no. 11, NCVER, Adelaide.

Committee on the Federal Role in Education Research 1992, *Research and education reform*, National Academy Press, Washington.

Coopers & Lybrand 1996, *The exercise of user choice in vocational education and training*, (4 vols: Report, Enterprise survey, Case studies, Review of international developments), OTFE, Melbourne.

Davy, G 1990, 'LIVE-NET: The Pilbara video conference project', in *Open learning and new technology conference proceedings*, Australian Society for Educational Technology, Perth.

DEET (Department of Employment, Education and Training) 1995, *Strategic action plan for flexible delivery of adult literacy, English as a second language, and numeracy programs*, DEET, Canberra.

Delors, J et al. 1996, *Learning: The jewel within*, report to UNESCO of the International Commission on Education for the 21st Century, UNESCO, Paris.

Department of Training (WA) 1995, *Flexible delivery and open learning modules project*, Perth.

Dobbs, G 1996, 'Quality by satellite: A case study in satellite course delivery to the workplace', *Training Agenda*, vol. 4, no. 2.

Drummond, I. 1993, *Flexible delivery of adult literacy and basic education programs*, Loddon Campaspe College of TAFE, Bendigo.

EC (European Commission) 1996, *Building the European information society for us all: First reflections of the high level group of experts*, EC, Brussells.

FDWP (Flexible Delivery Working Party) 1992, *Flexible delivery in TAFE: A national framework for implementation*, FDWP, Brisbane.

Federal Institute for Vocational Training (Germany) 1991, *LEITTEXTE, the self-reliant way of learning*, BIBB, Berlin.

Fullarton, H 1996, 'Railways turn to OTEN: An OTEN-State Rail training initiative', *Training Agenda*, vol. 4, no. 3.

Guthrie, H 1988, *Performance indicators in TAFE*, TAFE National Centre for Research and Development, Adelaide.

—— —— 1991, *Performance indicators revisited*, TAFE National Centre for Research and Development, Adelaide.

Hannun W 1990, *The application of emerging training technologies*, American Society for Training and Development, Alexandria.

Hope, K, 'Open learning for women in small business', ANTA, unpublished.

James, P 1996, *Evaluation of the Associate Diploma of Social Science*, OTEN, Sydney.

Johnson, R 1990, *Open learning*, AGPS, Canberra.

Kearns, P & Johnson, R 1993a, *Towards new alliances for learning in industry: A report on flexible delivery of training for industry, private and non-institutional providers*, Flexible Delivery Working Party, Brisbane.

—— —— & Johnson, R 1993b, *An enabling vision: An evaluation of the potential of open learning and flexible delivery to improve access to education and training by students with disabilities*.

—— —— Murphy, M & Villiers, G 1996, *Industry education partnership: Innovation and learning*, vol. 1 report, vol. 2 case studies, OTFE, Melbourne.

—— —— & Cotterill, D 1996, *Access to training by women in operative level jobs*, ANTA, unpublished.

—— —— & Schofield, K 1997, *Learning across frontiers*, ANTA, Melbourne.

Lawson, C 1997, *Report on mixed mode delivery trial in Advanced Certificate in Urban Horticulture at Werrington College*, OTEN, Sydney.

McLoughlin, C 1996, *An evaluation of the technologies and services of TAFE media network*, WA Curriculum and Customised Training Network, Perth.

Miller, D 1995, 'Investigation of the possibilities of providing vocational education and training on the Internet', in *Connectivity, convergence and vocational training*, Spark et al., Open Training Services, Melbourne.

Misko, J 1994, *Review of research: Learning styles*, NCVER, Adelaide.

—— —— 1996, *Work-based training, Vol 1. Costs, benefits, incentives and best practice*, NCVER, Adelaide.

Mitchell, J & Bluer, R 1997, *New learning technologies: A planning model for innovation*, OTFE, Melbourne.

NFDT (National Flexible Delivery Taskforce) 1997, *Final report*, ANTA, Brisbane.

NSDC (National Staff Development Committee) 1996, *Flexible delivery: Case studies of action learning groups*, ANTA, Melbourne.

OECD (Organisation for Economic Co-operation and Development) 1996, *Lifelong learning for all: Meeting of the Education Committee at Ministerial level 16–17 January 1996*, OECD, Paris.

OTEN (Open Training and Education Network) (NSW) 1992, 1995a, *Technology survey report*, OTEN, Sydney.

—— —— 1995b, *Adaptive technology survey: Equipment for people who have physical disability*, OTEN, Sydney.

—— —— 1996, *Adaptive technology survey: Equipment for people who have intellectual, neurological or specific learning disabilities*, OTEN, Sydney.

Palmieri, P, Blanksby, V & Hammond, B 1995, *Flexible delivery in action: Success factors and case studies*, OLTC, Adelaide.

Parker, H & Williams, E 1996, 'Towards a strategic framework of practice for industry-led flexible delivery of training', *Australian Vocational Education Review*, vol. 3, no. 1, 1996.

Radcliffe, G 1989, *Study of necessary teaching style changes to cater for handicapped students*, unpublished.

Rutherford, P 1996, *Annotations: The key to collaborative teaching on the Internet*, unpublished.

Seemann, K (ed.) et al. 1996, *Quality measures: Technical training in remote indigenous communities*, Centre for Appropriate Technology, Alice Springs.

Shore, D 1996, 'Making rhetoric reality', *Training Agenda*, vol. 4, no. 3.

Smith, R et al. 1996, *Flexible delivery in TAFE Queensland*, Centre for Applied Education, Griffith University, Gold Coast.

Spark, R et al. 1995, *Connectivity, convergence & vocational training: New communication technologies in VET*, Open Training Services, Melbourne.

Taylor, J & White, V 1991, *The evaluation of the cost-effectiveness of multi-media mixed mode teaching and learning*, AGPS, Canberra.

Taylor, J, Kemp, J & Burgess, J 1993, *Mixed mode approaches to industry training: Staff attitudes and cost effectiveness*, AGPS, Canberra.

Thomas, D (ed.) 1995, *Flexible delivery strategies in higher and further education*, Cassell, London.

Whittingham, T 1994, 'Best practices in the use of information technology in education and training', unpublished.

Widdowson, K et al. 1992, *Alternative delivery systems and processes for vocational education and training: Project report*, DEVETIR, Brisbane.

10 Assessor training programs*

Russell Docking

Context

THERE ARE MANY different contexts for assessment, many different people who may be assessors, and many different assessment procedures.

Competency-based assessment involves the gathering and interpretation of evidence relevant to well-defined competency standards, and the establishment of systems to manage the evidence gathering and interpretation process.

Contexts for assessment include formal training (such as technical and further education [TAFE], schools and universities), workplace training (also known as on-the-job training), and human resource management (selection, performance appraisal). Assessors include lecturers, specialist workplace assessors, industry assessors, line managers, supervisors, teams, licensing authorities, and the learners themselves (Rumsey 1993; Jones 1993b; Bloch et al. 1995). Assessment procedures include written examinations, oral assessments, practical tasks or projects, and the observation of workplace performance.

---

* This chapter is a reprint of Docking, R 1997, *Assessor training programs*, Review of research, National Centre for Vocational Education Research, Adelaide.

The interest in assessor training has increased since the development of competency-based approaches (Bailey 1993, p. 5), particularly because of the extension of training and assessment responsibilities beyond the traditional training providers. Little or no assessor training was offered to those responsible for traditional measurement-based assessment (Bloch et al. 1995). In any event, those who were trained in traditional measurement approaches would still require training to handle competency-based assessment (Millan 1996; Toohey et al. 1995). Martin (1993) includes workplace assessor training as an integral part of the competency-based training (CBT) model. The significance of assessor training is reflected in the work of the National Assessors and Workplace Trainers Body and the National Staff Development Committee of the Australian Committee on Training Curriculum (ACTRAC). None-the-less, there is still a view that assessor training is unnecessary (Ormond 1992).

Part of the problem arises from the preference in some areas for 'professional judgement' as an alternative to competency-based assessment. Bloch et al. (1995) reflect on the fact that experts may have 'internalised a model of competence' that may or may not be the same as those of other people. This use of these 'gut feelings' as a basis for assessment, so common in many contexts, raises serious quality assurance concerns. Experience demonstrates that such an approach does not meet the requirements of validity, reliability, fairness and equity, and it is not something that can be trained. Holistic assessment also presents significant problems in terms of these criteria, and is regarded by some as difficult (if not impossible) to teach (Smith 1993).

Van Berkel (1996, p. 8) defines the role of an assessor as 'to reliably determine the competencies or lack of competencies of an individual when assessed against a prescribed benchmark'. In this paper, research that relates to the training of any assessor for any assessment context and for any purpose or procedure is reviewed.

A review of the literature reveals that there are two major forms of published papers in the field of assessor training programs: anecdotal studies and conceptual studies.

Anecdotal studies (sometimes referred to as 'case studies') are typically presented at conferences by practitioners from industry, training providers or representatives of government agencies. These papers provide a very general description of the context of a particular approach to assessor training and the outcomes observed. The writers of these papers are deeply immersed in assessor training and are very context bound, and rarely attempt to demonstrate external validity by reference to other studies or contexts. The papers are generally well received by other practitioners, who draw upon them for practical ideas which they can use in the context of their own workplace.

Conceptual studies (sometimes referred to as 'armchair research') reflect upon experiences or ideas from the position of some philosophical or conceptual standpoint. Papers of this kind are presented at conferences and published in journals by academics, consultants and representatives of research institutes. Working party reports would also tend to belong to this category. The writers of these papers vary in their experience of assessment training and are very concept bound. In addition, they seek to influence the direction of assessor training programs by illustrating the relevance of their theoretical position by drawing upon anecdotal studies and empirical research. The papers are generally well received as a bridge between theory and application, but their actual impact on practice is erratic.

What is assessor training?

Literature in this area reports upon the form and content of assessor training programs, the certification and registration of assessors, quality assurance and marketing.

Kinds of assessor training programs

This section reports on the structure, form and length of assessor training courses and how they have changed since inception.

In general terms, assessor training has followed the national assessor standards in form and content. These standards were first developed by the National Assessors and Workplace Trainers Body, established in 1993 as the Assessors and Workplace Trainers Competency Standards Body. Two versions of the assessor standards have been developed. The first was published in 1993, superseded by a revised and much expanded version published in 1995 (Alexander 1997).

The National Staff Development Committee of ACTRAC has developed a suite of resources for assessor training that include a participant's guide, a program workbook and program resources. Assessor training materials have also been developed as part of the Certificate IV in Workplace Training.

Assessor training courses typically run from two to five days (Bloch et al. 1995). The hospitality industry conducts a two-day course (Newton 1992) as does the Navy (Reeves & Benton 1997).

While most courses require the completion of some on-the-job practical exercises, some assessor training (and assessment) is conducted entirely off the job (Alexander 1997).

Scant reference is made to the resources used in the courses. Ballenden (1992) describes a manual for assessors and Gibb (1991) describes a learning package 'Assessing competence in the workplace' (NSW TAFE Authority) consisting of a 13 minute video and print-based training resources that can be used flexibly as a basis for workshops, as a classroom resource or for private study.

Little mention is made of the background or skills required of assessor trainers. Newton (1992, p. 4) indicates that the assessor workshops conducted by the Hilton Group are facilitated by an industry assessor tutor, and Reeves and Benton (1997) specify very exhaustive requirements for assessor trainers in the Navy.

The Navy workplace assessor training course is a stand-alone course that runs over two days for personnel of leading rank or above (Reeves & Benton 1997). The course is based on the 1993 assessor standards. Courses are conducted at a central site and in remote locations. Assessor trainers in the Navy were expected to meet a formidable set of requirements, including:

- Certificate in Vocational Instruction
- diploma accreditation in engineering
- Chief Petty Officer rank
- 15 years Royal Australian Navy (RAN) on-the-job experience
- competencies in RAN training and technical fields
- workplace assessor course
- the RAN Training Co-ordinator Course
- an advanced assessor training program
- the Broadmeadows RPL course
- recent experience in workplace assessment
- competencies in workplace assessment

There is an urgent need for a comprehensive survey of the content, form and delivery modes of assessor training courses and the requirements of assessor trainers. Such a review should also investigate alternative methods of providing assessor training (Bloch et al. 1995). While a national curriculum has been developed, there is no data on the extent to which it is being used. The National Assessors and Workplace Trainers Body has recently drafted a set of guidelines for those conducting assessor training reflecting on content and assessment processes. Research will be needed into the effectiveness of these guidelines when they have been implemented. Without this research, change in assessor training cannot be monitored.

Target learning outcomes

What content is covered by assessor training and what outcomes are expected? Some writers do not call for any assessor training at all (e.g. Ormond 1992). Bloch et al. (1995) suggest that managers often feel they do not need assessor training because they believe they have enough experience and expertise in the technical area. Docking (1990, 1992) suggests minimal training is needed if appropriate infrastructure is provided (notably: clearly defined standards, evidence requirements and record-keeping systems).

Casey (1993) suggests that as the roles and responsibilities of assessors may differ (from conducting assessments to monitoring assessments), the training required would also differ. In his report, the assessor training was customised to match the needs of the specific industry in each case study.

The Australian National Training Authority (ANTA) Ministerial Council has specified that all assessors should be competent against the endorsed competency standards for assessors and in the relevant vocational competencies at least to the level being assessed (ANTA 1996; also Toohey et al. 1995).

Jones (1992) lists the responsibilities of assessors to be covered through the 1993 Workplace Assessor Standards. In a later paper, Jones (1993a) outlines a curriculum for assessor training covering such matters as purposes of assessment, forms of assessment, the conduct of assessment, and key quality principles of assessment.

Cseti and Nissen (1996) describe the current 1995 assessor competency standards developed by the Competency Standards Body—Assessors and Workplace Trainers. The standards consist of the assessment standard covering the ability to 'conduct assessment in accordance with an established assessment procedure'; the extension unit 'plan and review assessment'; and four specialist units: 'develop assessment tools', 'design an assessment system', 'establish an assessment system' and 'manage an assessment system'.

These objectives cover the technical skills, but the standards indicate that expertise in the area being assessed, familiarity with the standards, and communication skills are also required. A number of writers suggest that assessor training should go further than the techniques of assessment. For example, Gibb (1993, p. 64) suggests that 'the real challenge is to get trainers to accept that the active participation of the learner is a crucial element in the new system of training and assessment'. Percival (1992) describes the role of assessor training workshops as 'training of assessors, sensitising the profession to the meaning and uses of competencies, and action research to improve assessment technologies and to improve the nursing competency standards'.

Other writers indicate that assessor training should also emphasise the significance of the language, literacy and numeracy skills of the assessor, but question whether training in these areas could be accommodated within the limited time-frame of an assessor training course (Bloch et al. 1995). Travers (1995) urges assessor training to take special interest in the needs of women re-entering the labour force and to encourage people from different cultures to take part (see also Misko & Saunders 1995), and to be sensitive to discrimination that might be embedded in the competency standards used in assessment.

Providers of assessor training may deliberately (or accidentally) customise the training to reflect specific industry needs. Examples of research that explore the extent of customisation and its impact on quality are reported elsewhere in this chapter.

Assessing and certificating assessor competency

Considering the function of assessor training, it is surprising to see how little is said about the assessment of trainee assessors. Reeves and Benton (1997) report that in the Navy's assessor training course, each graduate is required to complete three assessments under the guidance of a training co-ordinator. This concern is also reflected in Alexander's (1997) issues for inquiry, listed later in this chapter.

Registering assessors

Bloch et al. (1995) call for an investigation of the practicality and advantages of a national registration of assessors. The idea of such a register of assessors is currently being investigated (ANTA 1996). Registers have been established in specific industry areas such as metals and engineering, building and construction and hospitality. The National Forest Industries Training Council (NFITC 1993) registers assessors for specific units of competency for a period of three years if they demonstrate competence in assessment and in that unit. The NFITC has established a small core of assessors who then assess others to expand the pool. What criteria should be used to admit an assessor to such a register?

Alexander (1997) lists 'competence' in the assessment standard unit and the extension unit of the Competency Standards for Assessment, and 'competence against the relevant vocational competencies' at least to the level being assessed. This view is reflected in a number of industry areas. For example, Bartlett (1997) cites the requirements in the mining industry as a qualification as a workplace assessor earned through a training program accredited against the national assessor standards, and qualifications or experience and a demonstrated level of competence in the field or vocation where they are assessing.

In a similar vein, Brinkworth (1996) reports that the telecommunications industry expects assessors to be 'competent in both the work being undertaken and in the process of assessment'. Assessors are registered if they are 'deemed' to be competent in the area being assessed and if they have successfully completed an accredited training course for the national competency standards for assessors. They are allocated an 'approved telecommunications assessor' number.

In the metals industry, 'assessment must be undertaken by an assessor approved by and registered with the ITC [industry training committee]' (van Berkel 1996, p.8). The criteria for registration are that an applicant must have completed an accredited course which meets the National Assessor Competency Standards (or equivalent); must be fully conversant with the National Metal and Engineering Competency Standards; and must themselves be technically competent in the areas being assessed or ensure an appropriately competent person is involved in the assessment process (pp. 8–9).

Other writers extend the requirements further to include understanding of the context, training processes and communication skills.

Fripp (1996) lists the requirements of an assessor as: technical expertise in their area, understanding of the employment/education environment, and knowledge of assessment processes and procedures.

Newton (1992) provides a person specification for (registered) workplace assessors at the Hilton Hotel Group. These require completion of the train-the-trainer course and workplace assessor course, and a prescribed set of experience, skills, knowledge and attitudes.

Worsnop (1993) suggests that assessors need to be 'familiar with their field, the standards that relate to the occupation or area of study they are assessing and RPL [recognition of prior learning] assessment methods and procedures and have reasonably effective communication and questioning skills'. Reeves and Benton (1997) report that in the future in the RAN, interpersonal communication skills will be required in addition to assessor skills.

Other writers also include endorsement by the industrial parties. Rumsey (1994) lists the requirements as: highly skilled in the aspects of competence to be assessed; acknowledged competency in assessment and relevant technical areas; adequate level of literacy in written and spoken English; completed appropriate assessor training; and endorsed by relevant industrial parties. Hancock (1993) specifies the interim registration criteria for the building and construction industry as: technical competence in the skills to be assessed; appropriate literacy in spoken and written English;

acceptability to an industry review panel; successful completion of assessor training to national standards; and endorsement by the enterprise consultative committee.

Other industries go beyond basic assessor training. Assessors registered to assess in the Certificate and Diploma in Frontline Management are not only expected to be competent in the competency standards for assessors but also the specialist unit 'design assessment tools'. They are also expected to be 'very flexible in their approach, highly organised and committed to the principles of the FMI [frontline management initiative]' (Dyson 1996).

Maintaining quality in assessor training

In their study of on- and off-the-job assessment, Thomson and Pearce (1993) conclude that 'the training programs in assessment that are currently available to teachers and supervisors need to be evaluated with a view to improving their quality' (p. 35). They call for action to 'raise the assessment skills of both [TAFE] teachers and [workplace] supervisors', (p. 37). Thomson (1994) again expresses concern that no checks have been developed to see if assessor training programs are producing competent assessors. Bloch et al. (1995) also call for the evaluation of 'current assessor training programs, including follow-up studies to determine the competence of the graduates'.

Alexander (1997) lists four criteria for quality assurance: the use of qualified assessors; established validation, feedback, appeals and verification process; industry-endorsed assessment guidelines; and provision for industry audit of the assessment process. The ANTA paper (1996) elaborates these four strategies to maintain quality. In particular, ANTA emphasises the use of validation, feedback, appeals and verification processes (which include third party review, training and mentor support, review of procedures, review of instruments and re-assessment of trainees); and industry audit of the assessment process (including adherence to guidelines, client satisfaction, equity and fairness, validity and reliability, costs and throughput).

What quality criteria should be applied? Firstly, one can review the assessor standards. Jones (1993b) reports on the validation of the first set of assessor competency standards.

Secondly, one can look at the quality of judgements made by trained assessors. Hummel (1995) conducted a study comparing trained workplace assessors with TAFE assessment. He found a 'parity of judgement between the Industry Assessors and the TAFE Assessor' in an RPL process for a national training module. (Although this rather begs the question 'how do we know that the TAFE assessment is valid?'.)

Thirdly, one can look at the requirements for registration. Van Berkel (1996, p. 8) indicates that 'agreed standards for recognition of assessors' is a key component of a quality assessment system.

Then one can look at the side effects of assessor training. In the metals industry, assessors 'will be subject to a form of moderation . . . which will include periodic reviews, validations of results and investigations of appeals' (van Berkel 1996, p. 9). The NFITC (1993) also audits the quality of assessor performance through a number of indicators including: the number of appeals, re-assessment random sampling, complaints and recertification assessments.

Finally, one can inquire about acceptability by industry. Cseti and Nissen (1996) report that 'relevance to the industry/enterprise' is cited as a major requirement of good assessor training (p. 3), although this can be taken too far. There is evidence that in an effort to be flexible, relevant and competitive, some assessor trainers are not addressing the full range of skills and knowledge required by the standards (Alexander 1997). This is borne out by the study of Reeves and Benton discussed below. Alexander reports that the National Assessors and Workplace Trainers Body is developing a guide to ensure proper coverage of the standards by trainers.

In the only comprehensive study of the quality of assessor training, Reeves and Benton (1997) have conducted an extensive review of assessor training in the Navy. They found that:

- Twenty-five per cent of graduates felt that their training was insufficient.
- Courses conducted in remote locations were considered less effective, as at times the courses were truncated to meet other organisational demands, or the trainers were not committed to the idea of a competency-based approach.
- Some graduates were not using their training in planning and assessment documentation.
- Although assessment of workplace assessor skills on the job is a critical component of assessor training, as many as 79 per cent of the respondents did not complete the three assessment tasks required for qualification. Reeves and Benton expressed concern that this failure to assess the assessors would undermine the credibility of the course and the competency-based training and assessment (CBTA) approach itself. Where assessments were done, they were often assessed by training co-ordinators who were not trained assessors.
- There was a lack of information for assessor trainers, so that it was not generally known that the assessment task was required, nor that the assessor standards underpinning the course had changed (from the 1993 to the 1995 version).
- Many of the trainers were not qualified to conduct the courses.
- The RAN course fell short of other industry-based assessor training courses in a number of areas, partly because it was based on the 1993 standards.

Alexander (1997) suggests that assessor training be reviewed, using the following questions:

- Are the assessments of assessors addressing the broad range of skills covered by the assessor standards?
- Are skills and knowledge integrated in the assessment of assessors?
- Is sufficient evidence of competence being gathered?
- Are assessment training providers monitoring and reviewing their assessment procedures?
- Are assessments carried out both on and off the job? How are on-the-job assessments verified?
- Is credit being offered to certificate assessors towards a workplace training certificate?

- Are people with special needs being adequately catered for?
- Have there been appeals and what opportunities have there been for reassessment?

In short, are the assessment training providers practising what they preach?

Marketing and promoting assessor training programs

There is very little written about this topic. Jones (1993b) recommends that 'consideration be given to ways in which the development and delivery of training for assessors may be encouraged and promoted'.

Although over 10 000 copies of the assessor standards have been distributed, Cseti and Nissen (1996) report that industry penetration is still low. They also argue that much more needs to be done to promote the four specialist units to provide the context and systems within which trained assessors can operate.

Who is involved in assessor training?

Research in this area is interested in the trainers and trainees participating in assessor training.

Organisations involved in design and delivery of assessor training programs

Alexander (1997) indicates that there are over 200 providers of assessor training in early 1997. Bloch et al. (1995) list private training providers, individual enterprises, TAFEs and universities. To this list, Bloch (1996) adds assessment centres.

There are many examples of industry-based assessor training courses, such as in the hospitality industry (Newton 1992) and the Navy (Reeves & Benton 1997). The Admin Training Company is developing a customised version of the ACTRAC Products Ltd flexible, generic assessor training program for the office/clerical area (ANTA 1996).

Martin (1993) proposes a three-tiered system where qualified mentors train supervisors in workplace assessor skills and also train learners in self-assessment skills.

Selecting assessor trainees

Assessor training is seen to be of value to every person in the workforce. It is seen to be of value to trainers ('trainers are assessors and therefore need to be competent in the competency standards for assessors', Gibb 1993, p. 57; see also Jones 1992; Davis 1993; Thomson & Pearce 1993), learners (Martin 1993), supervisors (Jones 1992; Casey 1993; Davis 1993; Martin 1993; Thomson & Pearce 1993), managers (Jones 1992; Casey 1993; Davis 1993; Spicer 1992; Martin 1993; Ballenden 1993), union representatives (Davis 1993) and external assessors including TAFE staff (Jones 1992).

Davis (1993), reporting on a number of case studies into recognition of prior learning/competency-based training (RPL/CBT), describes how the selection of assessors was the subject of negotiation between the industrial parties. Brinkworth (1996) reports that assessors in the telecommunications industry are selected from those who are 'deemed to be competent in the areas in which the assessment will take place' by their employer.

In some areas of industry, personnel are selected for assessor training because of their rank or status. In the RAN, assessor training is offered to all personnel of leading rank and above (Reeves & Benton 1997). Newton (1992) indicates that workplace assessors are selected if they have a sound understanding of CBT, are committed to its success, hold a position of authority/responsibility, are prepared to commit private time, and are expert in their field.

Requirements such as these may have an impact on the catchment of assessor training courses. Bloch et al. (1995) report a 'marked gender imbalance of those attending assessor training' (mainly males) and 'the apparent lack of assessor trainees from non-English-speaking backgrounds'. They call for research on assessor training take-up rates.

The general expectation is that assessors will be endorsed by, registered with, or employed by a registered training provider (Toohey et al. 1995) and will therefore be working with guidelines and a supporting infrastructure.

What is the value of assessor training?

How certificated assessors use their skills

Reeves and Benton (1997), in their study of assessor training in the Navy, found that only 42 per cent of assessor training graduates used their training, although 59 per cent regarded the training as useful. The discrepancy reflects the fact that many respondents found the training useful for duties other than formal assessment. Reasons for not using the assessor training included:

- no subordinates to assess
- other personnel did the assessments
- not a subject matter expert
- not authorised to assess by the Head of Department
- did not want to assess

Cseti and Nissen (1996, p. 2) suggest a similar situation exists across other industry areas. 'A great number of workplace operators, supervisors, team and unionists have been trained as assessors but do not have a context within which to practice their skills.' However, like the Navy study, they recognise that the assessor standards and assessor training can be used more broadly to support the conduct of training needs analysis, the recognition of prior learning, the diagnosis of performance for classification purposes, the awarding of a qualification, the establishment of a performance development/appraisal system and/or the integration of training, and other human resource management functions.

Other writers indicate other uses. Bloch (1996) sees assessor training as a vehicle to integrate on and off-the-job learning, and Newton (1992) describes how the skills of trained assessors have been enshrined in a job description for workplace assessors at the Hilton Hotel Group.

These are grand hopes. In stark contrast, Thomson (1994) feels that the short assessor training courses could really only impart 'survival skills'.

Costs and benefits of assessor training

Bloch (1993) describes the difficulties of determining costs and benefits in the training and assessment area. Bloch cites a study (not referenced) that lists the 'training of assessors to interpret standards' as the third most important component in enhancing quality (after 'specifying standards clearly' and 'ensuring that the assessment process is valid'). Bloch indicates that in order to minimise the costs of assessment from assessor training, greater use should be made of existing assessors. In the examples given by Bloch, these are TAFE lecturers, many of whom would not have been trained in assessment at all! (Bailey 1993).

No research identifying benefits was located, and research on costs focussed on monetary cost. The only hard figures to be found are in a paper by Newton (1992) who cites costs of the assessor training course for the Hilton Hotel Group as $535–$635 *per participant* for a two-day course (including participant's manual), or $105 if an in-house trainer is used. These costs are high, given that there are uncertain returns. In view of this, Reeves and Benton (1997) recommend that the numbers of trained assessors be managed to ensure that only those who need training are trained (taking into account such factors as assessment workload and leave periods).

Implications for policy and practice

The review of the literature suggests a number of implications for policy-makers and practitioners.

- *Sponsor further research.* A concerted research effort is urgently required to extend our understanding of competency-based assessment, how this approach can be taught to assessors and how the impact of assessment can be evaluated. Suggestions are made about specific research topics in the next section.
- *Include interpersonal skills (communication skills, cultural awareness and gender awareness) in assessor standards.* These skills are currently regarded as desirable pre-requisites for assessor training, but clearly there is a need to examine these qualities within the context of the assessment process and attend to them in assessor training.
- *Tighten up on accreditation procedures to ensure that all the assessor competencies are covered, that assessor trainers are qualified and experienced, and that the assessment process is rigorous and includes on-the-job components.* It is startling to observe that assessor courses are accredited that do not meet the assessment standards that they set within their own curriculum.
- *Provide for ongoing auditing of assessor training courses to ensure that they conform to their accreditation conditions.* There is an urgent need to ensure that assessor training courses are delivered to the standard set through the accreditation process, and that the performance of assessors trained through these courses is monitored.
- *Promote the specialist units more aggressively.* The assessment standard unit and the extension unit assume that the assessor is working within a well-defined and well-managed assessment system. Such a system would include model assessment tools and guidelines for assessors to follow. Without such infrastructure, assessors trained to the basic units will not be able to assess with the precision expected. It is worth noting that the training package concept currently being developed by ANTA will substantially support this development.
- *Ensure that all assessors (including TAFE lecturers) are qualified assessors.* The assessor standards do not only relate to the workplace. It can be argued that assessment in the artificial world of the training campus is more difficult than the workplace, yet we still find that lecturers are given little or no assessor training.

- *Establish a national register of assessors (or comprehensive industry-based registers of assessors).* The responsibility of an assessor is awesome. The dangers of incompetent assessment go far beyond the classroom and can impact on a person's whole life and harm their future clients or employers. A register of assessors which imposes rigorous entry criteria and continuing professional development would be in the interest of those being assessed, their trainers, those issuing their certificates, their employers and the community.

Findings and directions for further research

The review also revealed a number of areas requiring further research investigation.

- *The range and characteristics of assessor training courses (accredited and others) currently on offer.* (See also list provided by Alexander 1997.) Assessor training courses have proliferated, with little monitoring of their scope and quality. There are few opportunities to learn from best practice, or from the mistakes of others.
- *The impact of assessor training on assessment behaviours and quality of judgement.* It is an article of faith that assessor training will improve the assessment process, but this faith might not be justified. This research would need to compare the efficacy of judgements made by trained assessors from different assessor training courses in terms of validity, reliability, fairness and equity.
- *The impact of assessor training on the person being assessed in terms of learning, motivation and feedback.* Assessment is an intimate process that can have a profound impact on the learner. It can impact on learning styles, self-concept, motivation, self-assessment skills and career plans. Research is needed to explore the impact of assessor training in this area.
- *The impact of assessor training on the productivity of enterprises.* The costs associated with assessment are often rationalised by arguing that the accurate knowledge of competency resources will ultimately result in increased enterprise productivity. The conditions required for that expectation to be realised need to be explored.
- *Research assessment approaches such as professional judgement and holistic assessment to measure their validity and reliability, and to identify ways of encouraging integrated competency-based assessment.*

Professional judgement and holistic assessment are based on internalised standards and are therefore difficult to elaborate and even more difficult to teach. Integrated assessment recognises the need to see competencies working together in context (rather than in isolation, fragmented and atomistic), so that both the underlying elements are observed *and* their integrated application within real tasks. This research should explore ways to achieve not only the naturalness of professional judgement and holistic assessment but the precision of competency-based assessment, and ways to develop those skills through assessor training.

References

Alexander, R 1997, 'Assessment training past, present and future', paper presented at the Competency-based Training and Assessment conference, February, IIR, Sydney.

ANTA (Australian National Training Authority) 1996, *Assessment discussion paper*, Standards and Curriculum Council, ANTA, Melbourne.

Bailey, M 1993, 'Judgement, evidence and the assessment of competency', paper presented at the Testing Times national conference, Sydney.

Ballenden, C 1992, 'Assessment of clerical competencies', paper presented at the Competency-based Assessment Conference, June, IIR, Sydney.

—— —— 1993, 'Designing an assessment system for the clerical-administrative workforce', in *Testing times*, NCVER, Adelaide, pp. 1–7.

Bartlett, K 1997, 'Assessment—How to make it flexible and innovative', paper presented at the Competency-based Training and Assessment conference, February, IIR, Sydney.

Bloch, B 1993, 'Costing testing', in *Testing times*, NCVER, Adelaide, pp. 8–16.

—— —— 1996, 'Integrated assessment—A panacea for all?', paper presented at the *Integrating assessment: Removing the on-the-job/off-the-job gap*, NCVER, Perth.

—— —— Clayton, B & Favero, J 1995, 'Who assesses', in *Key aspects of competency-based assessment*, ed. W C Hall, NCVER, Adelaide.

Brinkworth, B 1996, 'Telecommunications industry: Moving towards a CBT and assessment solution', paper presented at the Integrating Assessment: Removing the On-the-job/Off-the-job Gap conference, NCVER, Perth.

Casey, D 1993, 'Competency-based training in the workplace-assessment issues', paper presented at the National Assessment Research forum, VEETAC, Sydney.

Cseti, D & Nissen, D 1996, 'Using the competency standards for assessment', paper presented at the Integrating Assessment: Removing the On-the-job/Off-the-job Gap conference, NCVER, Perth.

Davis, S 1993, 'Workplace assessment issues and processes', paper presented at the National Assessment Research forum, VEETAC, Sydney.

Docking, R 1990, 'Assessment in the workplace: Facts and fallacies', in *Assessment and standards in vocational education and training*, TAFE (NCVER), Adelaide.

—— —— 1992, 'Methodologies for workplace assessment', paper presented at the Competency-based Assessment conference, June, IIR, Sydney.

Dyson, C 1996, 'The frontline management assessment strategy—Challenges and opportunities', paper presented at the Integrating Assessment: Removing the On-the-job/Off-the-job Gap conference, NCVER, Perth.

Fripp, C 1996, 'Workplace assessment', paper presented at the Integrating Assessment: Removing the On-the-job/Off-the-job Gap conference, NCVER, Perth.

Gibb, J 1991, *The development of draft competency standards for workplace trainers*, TAFE National Centre for Research and Development, Adelaide.

—— —— 1993, 'Trainers/assessors and learners: The human face to the new CBVET system', in *Testing times*, NCVER, Adelaide, pp. 57–65.

Hancock, K 1993, 'Transition assessment in the building and construction industry', paper presented at the National Assessment Research forum, VEETAC, Sydney.

Hummel, K 1995, *Recognition process: Evaluation of assessor judgement*, Assessment Centre for Vocational Education, Sydney.

Jones, B 1992, 'What should be the assessors' profile? Developing standards for assessors', paper presented at the Competency-based Assessment conference, June, IIR, Sydney.

—— —— 1993a, 'Assessor standards—what do they mean?', in *Testing times*, NCVER, Adelaide, pp. 135–141.

—— —— 1993b, 'Developing national standards for workplace trainers and assessors', paper presented at the Training Reform Update conference, IIR, Sydney.

Martin, P 1993, 'Assessment and assurance: A model for delivery CBT systems', in *Testing times*, NCVER, Adelaide, pp. 151–170.

Millan, M 1996, 'Implementation of vocational education in NSW secondary schools', paper presented at the Integrating Assessment: Removing the On-the-job/ Off-the-job Gap conference, NCVER, Perth.

Misko, J & Saunders, J 1995, 'Needs of special workers', in *Key aspects of competency-based assessment*, ed. W Hall, NCVER, Adelaide.

Newton, A 1992, 'How Hilton International Hotel Group select and train on-the-job assessors', paper presented at the Improving Performance Results Through Competency-based Assessment conference, November, IIR, Sydney.

NFITC (National Forest Industries Training Council) 1993, *Assessment framework*, NFITC.

Ormond, H 1992, 'Implementing an assessment process at Rural Water Commission of Victoria', paper presented at the Competency-based Assessment conference, June, IIR, Sydney.

Percival, E 1992, 'Assessing competencies for entry into nursing practice', paper presented at the Competency-based Assessment conference, June, IIR, Sydney.

Reeves, S & Benton, P 1997, 'Workplace assessment in a well established CBTA system—A Navy perspective', paper presented at the Competency-based Training and Assessment conference, February, IIR, Sydney.

Rumsey, D 1993, 'Practical issues in workplace assessment', paper presented at the National Assessment Research forum, VEETAC, Sydney.

—— —— 1994, *Assessment practical guide*, AGPS, Canberra.

Smith, L 1993, 'Some thoughts about holistic assessment', paper presented at the National Assessment Research forum, VEETAC, Sydney.

Spicer, FO 1992, 'The role of industry in competency assessment', paper presented at the Competency-based Assessment conference, June, IIR, Sydney.

Thomson, P 1994, 'Current research issues in competency-based assessment', paper presented at the National TAFE Senior Executives' conference, NCVER, Adelaide.

—— —— & Pearce, P 1993, *Testing times: A study of assessment on and off the job*, NCVER, Adelaide.

Toohey, S, Ryan, G, McLean, J & Hughes, C 1995, 'Assessing competency-based education and training: A literature review', in *Australian and New Zealand Journal of Vocational Education Research*, vol. 3, no. 2, pp. 86–117.

Travers, B 1995, 'Still counting for nothing?', in *Key aspects of competency-based assessment*, ed. W C Hall, NCVER, Adelaide.

van Berkel, C 1996, 'Assessment', paper presented at the Integrating Assessment: Removing the On-the-job/Off-the-job Gap conference, NCVER, Perth.

Worsnop, P J 1993, 'Recognition of prior learning in Australia', paper presented at the Training Reform Update conference, IIR, Sydney.

11 Quality assurance in vocational education and training*

Paul Hager

Context

QUALITY ASSURANCE IS a topic on which much has been written in recent years. Most of these writings are in favour of the adoption of some kind of quality measures (or, at least, some new and better quality measures, since it is arguable that some kinds of quality measures, however primitive, have usually been in place in many organisations). Some of these writings have been critical of proposed quality measures (or at least of particular kinds of them). However, very few of them have any basis in systematic experience of implementing quality measures. Rather, they more often reflect the desire of their authors to see things change for the better.

Thus, except for the most perceptive of them, these writings have no claim to be called research papers. This situation is reflected in miniature in the vocational education and training (VET) sector. A major interest in quality assurance in the VET sector has come some time after its widespread adoption in the private sector and in some other parts of the public sector. Thus research on quality assurance in the VET sector in Australia is very limited and of recent origin. The research that is available often draws on experience from other sectors with the researchers/authors looking to its possible applications to the VET sector.

---

* This chapter is a reprint of Hager, P 1997, *Quality assurance in VET*, Review of research, National Centre for Vocational Education Research, Adelaide

The growing interest in quality assurance in the VET sector can be traced to various causes. Close connections with industry would have alerted members of the VET sector to the advantages that some parts of industry have gained from the introduction of quality assurance measures. This, coupled with the more competitive training market that has been increasingly encouraged by governments in Australia, together with increasing community demand for quality as they pay more for courses, has ensured that quality assurance is now a major VET priority.

Quality is a key concept in recent policy and strategy documents issued by the Australian National Training Authority (ANTA) (e.g. 1994a, 1994b). The emphasis on quality in the VET sector is intended to be comprehensive:

> *Quality in all aspects of vocational education and training is a key objective of the National Strategy. Vocational education and training will focus on best practice and quality assurance. Staff development and management improvement will be priorities. All aspects of training design and delivery—recognition of training, accreditation, curriculum, assessment and qualifications—will be reviewed to ensure a quality service for clients.*
>
> (ANTA 1994b, p. 11)

ANTA went on to devote one volume of its 1995 Annual Report to 'Benchmarking Vocational Education and Training' in Australia (ANTA 1995). This provides a large variety of system-wide performance measures based on outcomes, outputs, and activities. Some of the performance indicators for these measures are more closely connected with quality (employer satisfaction, graduate destination) than are others (such as module load completion rate, $/Annual Hours Curriculum). While the latter are relevant to quality considerations, they need to be interpreted carefully as part of a larger story. For example, taken by itself a low $/Annual Hours Curriculum figure may be consistent both with delivery of sound quality courses or of cheap inferior courses. ANTA's approach is gradually to refine the kinds and the scope of the performance measures for annual publication (e.g. to bring private providers into the picture, to improve interstate comparative data, etc.).

What is quality in the VET sector?

There is no one universally applicable answer to this question 'what is quality?', since quality is a function of many factors which vary with the nature of an organisation, its particular purposes, its overall philosophy, the nature of its clients, etc. Thus there are various approaches to implementing quality none of which is suited to all situations (Technical and Further Education Commission NSW 1994, p. 5—hereafter in this chapter this document is referred to as *Signposts to quality*).

Given the diversity of organisations that comprise the Australian VET sector, as well as regional and State differences, it can be expected also that there is no universal answer to the question 'what is quality in VET?'. This is the view taken by two substantial research projects that have canvassed quality assurance systems in selected organisations for the express purpose of facilitating the introduction of quality assurance systems into the VET sector. The first project is *Signposts to quality* (Technical and Further Education Commission NSW 1994). The second is *Quality in action* (Ball & Neville 1995).

Signposts to quality is an examination of ten case studies covering manufacturing and service industries, universities and technical and further education (TAFE) colleges. All of the case studies involved organisations with a customer focus. It was found that a large number of common features emerged from the ten case studies. These were grouped into 22 'key themes'. The reader is warned that although the key themes reflect common experiences of the case study organisations, they should not be thought of as 'principles' since 'the approaches taken by the case study organisations have not been analysed against findings and theories presented in the literature on quality' (*Signposts to quality*, p. 5).

Quality in action is a study of six organisations which are all acknowledged leaders in quality management and have substantial experience in one or more of four quality management approaches: quality matrix, self-managed teams, benchmarking, and re-engineering. This report groups its findings into four chapters that deal with these approaches, including in each case a discussion of the suitability of the approach for the VET sector. What follows is a brief outline of the approaches to quality assurance dealt with by these two research reports.

The relative prominence of the various approaches in the literature on quality assurance in Australian VET will be discussed also. It should be noted that the literature review undertaken for the writing of this chapter did not throw up any approaches to quality assurance in Australian VET that was not amongst the ones discussed in these two research reports.

Types of quality program that may be relevant to VET

Consistent with there being no one answer to the question 'what is quality?', there are various types of quality program available. These types of quality program vary in their relevance for VET. In the following listing, only salient features of the different approaches are included. However, further details can be obtained from *Signposts to quality* and *Quality in action*, as well as from other references mentioned in the outline of each type of quality program.

Total Quality Management (TQM)

Total quality management (TQM), also known as continuous improvement, is 'a management approach that primarily aims to supply goods and services to an organisation's customers that are '"fit for the customer's purpose", while maximising the competitiveness of the organisation. That is achieved through an organisation-wide concentration of effort on processes that add value to the customer, while eliminating all aspects that cause waste and error' (*Signposts to quality*, p. 85). McEwan & Stenson (1995) report an attempt to apply TQM to a VET sector organisation. Likewise, Canberra Institute of Technology has adopted a TQM approach (*Signposts to quality*, p. 25ff.). Hinchcliff (1993) offers a critique of TQM as an approach to quality assurance in educational organisations. His main critical comments centre on its top-down philosophy, its claim to novelty and its focus on all aspects of an organisation. A somewhat different critique of TQM in education, from an equity perspective, is provided by Capper & Jamison (1993).

The Crosby method

The Crosby method is a pragmatic approach to quality based on aiming for 'zero defects' in the way things are done in an organisation. As yet there appear to be no instances of this approach being applied in the Australian VET sector.

Quality assurance—the ISO 9001/AS 3901 standards

Quality assurance is a mechanism to enable organisations that have quality systems in operation to be able to proclaim publicly that their system is a satisfactory one. To this end, international standards have been developed. The ISO 9001 and the AS 3901 (its Australian equivalent—see Australian/New Zealand Standard 1995) series standards represent an international consensus on principles for quality measurement. They identify 20 areas of the organisation that need to be considered in developing the system, under three broad headings. The headings are 'broad policy elements', 'operation and control of the quality system', and 'business operation'. In the Australian VET sector, some examples are: the National Centre for Vocational Education Research (NCVER) has been endorsed as meeting the ISO 9001 standard; Whyalla College of TAFE has embarked on a quality process aimed at achieving AS 3901 accreditation (*Signposts to quality*, p. 45ff.); so has the Gold Coast Institute of TAFE (*Signposts to quality*, p. 30ff.).

The quality matrix

A quality matrix 'provides the framework for quality initiatives and breaks complex improvement strategies into achievable parts' (*Quality in action*, p. 3). To achieve this, a quality matrix shows an organisation's plans for change in the form of a diagram. 'It encapsulates what quality means for the organisation and identifies fundamental imperatives for change' (*Quality in action*, p. 11). Put simply, a quality matrix is a two-way grid. On one axis it sets out a number of areas on which the quality initiatives will focus. On the other axis it contains levels or stages which, cutting across the quality areas, represent levels or stages of achievement for which target dates can be set. For example, in 1994 the NSW TAFE Commission launched its quality strategy which centred on a quality matrix with seven areas of focus for quality initiatives and six levels of achievement.

The seven areas of focus for quality initiatives were 'customer focus', 'leadership', 'creative involvement of staff', 'planning', 'internal co-operation and communication', 'process improvement in support of teaching/learning', and 'systematic use of information'. In the basic quality matrix, each cell contained a descriptive indicator of what achievement of quality in the particular area at the specified level would look like. For instance, in the area of customer focus, the descriptive indicator at the lowest level was:

> *TAFE NSW staff have limited understanding of what customer service involves for an education and training organisation.*

At the highest level in the area of customer focus, the descriptive indicator was:

Customers are powerful ambassadors for TAFE NSW.
(*Quality in action*, Appendix I, p. 111)

Taking account of the interrelated nature of the areas of focus for quality initiatives, appropriate target dates could then be set for the various levels under each area. It should be noted, however, that the matrix only specifies what changes are needed to occur, not *how* they will occur. Thus a quality matrix on its own merely provides a broad framework for more specific and focussed quality initiatives within an organisation.

The *Quality in action* report finds that 'the very nature of the matrix as a planning tool for a quality strategy makes it relevant right across the VET sector', though its implementation 'should be considerate of the specific cultural aspects of each organisation' (p. 26). So it seems that the quality matrix can be expected to be widely used in the Australian VET sector.

Best practice and benchmarking

Best practice and benchmarking go together and, on the basis of the literature review undertaken for the writing of this chapter, they are easily the most popular approaches to quality assurance so far adopted in the Australian VET sector. Internationally, best practice 'refers to the way in which leading-edge companies are able to manage and organise their operations to deliver world-class standards of performance in such areas as cost, quality and time loss' (*Signposts to quality*, p. 88). It involves comprehensive changes in corporate culture, particularly in the ways managers and employees work. This is so because there is an 'emphasis on the development of a bottom-up system focussing on the experience, skills and competencies of all people in the organisation'. This requires much more flexible and adaptive approaches to managing and carrying out work.

Benchmarking 'is concerned with internal and external measurement of performance against standards of world best practice' (*Signposts to quality*, p. 89). Clearly the first requirement is to have a sound internal benchmark of current performance against which any improvements can then be measured. Once this is done, benchmarking can be carried out internally or externally. There are four main categories:

- *Internal*—seeking out and replicating examples of best practice within an organisation. For example, across branches, within branches, over regional territories.
- *Competitors*—investigation of direct competitors. For example, comparing Ford with Holden.
- *Industry*—comparison with non-competitors in the same industry. For example, domestic airlines operating in different countries.
- *Generic*—comparison with organisations outside own industry. For example, comparing reservation procedures at Sheraton Hotels with those used by Qantas. (*Quality in action*, pp. 63–64)

It is common for organisations to start with internal benchmarking and then move on to comparisons with non-competitors in the same industry. 'Generic benchmarking is by far the most complex and least practised in Australia' (*Quality in action*, p. 64). There is a further important distinction between benchmarking activities that focus on numbers and those that focus on processes, i.e. between *performance* benchmarking and *process* benchmarking. These can be characterised as follows (*Quality in action*, pp. 64–65):

- *Performance benchmarking*, or scoping, compares high-level aggregated measures of performance, such as profit margins, sales per employee, cycle times, return on investment.
- *Process benchmarking* compares aspects of discrete business processes, such as how a product is produced, how customers' complaints are handled, how a billing system operates.

The *Quality in action* report (p. 83) concludes that the 'VET sector lends itself to a wide variety of benchmarking approaches' and it also provides recommendations and advice on the implementation of such approaches. As already noted, ANTA has initiated performance benchmarking at the system level (ANTA 1995). This will be used increasingly to compare performances of the various providers in the VET sector.

As well, the literature review undertaken for the writing of this chapter produced a range of VET projects, mostly at the sub-system level, that involve best practice and/or benchmarking. (These include Montague & Evans 1996; Robson 1995; Anderson 1996; Whittingham 1994; New South Wales Board of Vocational Education and Training 1994; Hampton 1995; Leroux 1993; Grosse & Pugh 1995; Anastas & Casey 1996; Barnett 1995; Bishop et al. 1995).

On the face of it, this is a lot of research on best practice and/or benchmarking. However, some caution is in order. Analysing the case studies collected in Moy (ed.) (1996), Misko (1996, p. 91) noted that 'a more pragmatic and personal interpretation of best practice' was apparent. In fact, it is evident that in those case studies the respondents generally interpret 'best practice' to mean 'what our organisation does well'. Hence, any connection with benchmarking is, at best, tenuous. In 1992, commenting on the state of quality implementation in Australian industry, Macneil et al. (1992) found that while the practice of benchmarking was both widespread and increasing, most of the activities were at a fairly unsophisticated level.

Given that the VET sector is now in the early stage of quality implementation, it is only to be expected that the Macneil et al. comment is applicable to that sector at the moment. The *Signposts to quality* report's conclusion about benchmarking (p. 10) supports this view: 'There is insufficient data to draw many meaningful conclusions on benchmarking. This aspect requires further investigation'. Overall, despite the relatively high level of interest in the VET sector, both best practice and benchmarking require much more work to test their value to this sector.

Self-managed teams

Self-managed teams represent a quality management approach in which the work team assumes full responsibility for all aspects of its work, including the processes and the contribution that each team member makes to the processes. According to the *Quality in action* report (p. 31), 'there is no such thing as a typical self-managed team. Every team is unique and reflects the nature of the work and output, as well as the structure, culture and values of the organisation'. However, there are common characteristics shared by all self-managed teams (*Quality in action*, pp. 31–32).

- The self-managed team is an autonomous group of workers responsible for a total process or sub-process producing a product, service or project for a customer.
- The self-managed team mostly has between five and 15 members.
- As well as performing their day-to-day work, self-managed team members take on responsibilities usually reserved for management.
- The self-managed team changes the way work is both organised and performed. Multi-skilling, job enlargement and enrichment often go hand-in-hand with self-management, as team members share roles and assume managerial responsibilities.
- The self-managed team is highly autonomous and has the authority to solve problems, make decisions and take action. In short, team members are fully empowered to manage themselves and the work they perform.

As the case studies in the *Quality in action* report demonstrated, self-managed teams 'may not be appropriate to every work situation' (p. 36). Research literature together with the case studies suggest that:

> *Self-managed teams have significant potential:*
>
> - *if the process is complex*
> - *if there is a high level of interdependence between three or more people*
> - *if the process has a large labour input*
> - *if the people are involved in fairly similar activities—that is, it is possible for the workgroup to share a common goal.*
>
> (*Quality in action*, p. 37)

Dumaine (1990 quoted in *Quality in action*, p. 37) suggests that industries which are more suited to self-managed teams include: automotive, chemicals, steel, paper, insurance, banking, telecommunications, health, hospitality and education. However, it is also clear that self-managed teams are not suited to all work situations, even in the industries just listed. Cases where self-managed teams are not appropriate include:

- those where work is 'so simple that sharing roles and responsibilities would not add anything to the productivity and flexibility of the group' (*Quality in action*, p. 55)
- those where work is complex and jobs are highly specialised, making it difficult for people to learn one another's jobs and take on new responsibilities. Thus, self-managed teams may not be suited to 'areas like research, policy and finance' (*Quality in action*, p. 55)
- those where quality management is a concept in the early stages of its implementation. It appears that self-managed work teams arise more effectively and naturally in organisations where employees have a history of involvement in quality initiatives (see *Quality in action*, p. 55)

One of the case studies in *Signposts to quality* is the Gold Coast Institute of TAFE which, as the main focus of its quality initiative, has set up self-managed work teams. Although it is still very early in the implementation of this quality initiative, it is claimed that 'the establishment of self-managed teams has resulted in a dramatic increase in productivity and job satisfaction for all staff' (*Signposts to quality*, p. 91). Given this, it is no surprise that the *Quality in action* report concludes that:

> *Self-managed teams are relevant right across the vocational education and training sector: from large public providers to small private providers; from people in central offices to front line college staff; from teachers and curriculum developers and designers to administrative and support staff. However, every VET organisation will have sections that are suited to the team approach to work and others that are not. The issue then becomes identifying those parts of the organisation where teams will work best . . . It would be inappropriate for senior managers to make the decision that from a certain point in time all staff will work in self-managed teams.*
>
> (*Quality in action*, p. 54)

Given these findings, it is disappointing that the literature review undertaken for the writing of this chapter failed to bring to light any other research studies of self-managed teams in the Australian VET sector.

Process re-engineering

Process re-engineering is a much-discussed approach to quality that, rather than looking at gradual improvement of current processes, proposes that they be discarded and the business re-invented from scratch in a form that is suited to the present era. The *Quality in action* report characterises this approach as follows:

> *Re-engineering is needed to make large clumsy organisations (structured in terms of simple tasks and complex tracking mechanisms) more like small, flexible and integrated ones. In short, the purpose of re-engineering is to reunify tasks into a coherent business process and structure the organisation in ways which best add value for the customer.*
>
> (*Quality in action*, p. 91)

However, the *Quality in action* report also states that the 'jury is yet to return its verdict on whether re-engineering is a worthwhile quality tool, or just another management "fad"' (p. 89). While not dismissing re-engineering entirely, it cautions VET organisations that may be considering this approach that it 'is a costly quality management practice which has a very high failure rate' (p. 108). On the evidence of this review, process re-engineering has had only limited application in Australian organisations. Given that the review also failed to find any research studies of this approach being tried in the Australian VET sector, there is no need to say any more about this approach here.

Concluding comment on types of quality program

Although the above brief characterisations of the types of quality program are broadly accurate, it is noteworthy that even within the relatively small amount of Australian literature on quality assurance in VET, which is the focus of this chapter, there are sometimes small but significant differences in how various authors define the same type of approach. Thus it should not be assumed automatically that, e.g., all approaches self-described as 'best practice' or 'benchmarking' are identical in their principles and practices.

Research on implementing a quality program

As indicated previously, the introduction of formal quality assurance systems into the VET sector is fairly recent. This means that the available research is rather limited. What research there is consists mostly of case studies of quality assurance systems from outside the VET sector in order to assist in selection of suitable systems for that sector, or developmental research projects centred on piloting the introduction of some quality assurance measure to some part of the VET sector. There are some recent projects that will be of significant interest to the reader (e.g. McEwan & Stenson 1995; Stewart 1995; *Signposts to quality* 1994, p. 25ff). From the available literature dealing with the implementation of quality assurance in the VET sector, the following are issues that need to be addressed. These issues are mainly based on the experiences of the ten case studies covering manufacturing and service industries, universities and TAFE colleges reported in *Signposts to quality*.

Personnel requirements for effective quality implementation

For quality implementation to work in an organisation, it is vital that the chief executive officer and senior management are fully committed to the process and are involved in such a way that they are seen to be driving the process. It is also important that the process is managed by someone who is committed to the organisation, has a thorough knowledge of the system, and is a 'true believer' in quality.

Planning the implementation

An effective planning process is vital to the implementation of a quality system. A staged plan that includes a realistic budget is recommended. Quality initiatives include a significant cost for their effective implementation. This includes convincing staff to become committed to the quality initiative and informing customers about its significance for them. All of the case studies in *Signposts to quality* that set time-frames for the implementation of their quality system found that it typically took longer than expected. Although a number of the case studies found the use of consultants helpful in the early stages, it was important that their efforts were tailored to the culture of the particular organisation. Buying generic quality packages or systems from consultants was not recommended.

Staff development programs

Convincing staff to become committed to the quality initiative requires effective staff development programs. It is crucial that staff feel that they have significant ownership of this staff development process. In hindsight, most of the case studies in *Signposts to quality* felt that they should have paid even more attention to this issue. Research by Frew (1994, 1996) points to the strength of the entrenched culture of the VET sector. He argues that staff development programs aimed at introducing quality initiatives will need to build on that culture if they are to be effective. The case studies in *Signposts to quality* also emphasised the importance of early and comprehensive staff development for middle managers. This group has been found to feel threatened by quality initiatives, as they perceived that their role in the organisation was being undermined. This was particularly the case in organisations that were being restructured at the same time as a quality program was being introduced. This is a not unlikely situation in the VET sector.

Industrial relations and HRM issues

Effective introduction of a quality program requires the involvement of all stakeholders including unions. Some of the case studies in *Signposts to quality* also rewarded staff for their efforts in the quality initiatives. These included staff dinners, magazine articles highlighting achievements, and staff awards. A number of the case studies introduced quality elements into performance agreements, job descriptions, contracts, and enterprise agreements.

Ascertaining customer views and needs

In all of the case studies in *Signposts to quality*, the customer was the focus of the quality initiative. This means knowing who the customers are, finding out their needs and expectations, gaining regular feedback, and acting on this to improve the service. McGrath and Ball (1995) provide an example of this kind of research and its application to quality improvement-from a global perspective in a large VET organisation. Grosse and Pugh (1995) provide an example of a micro application of the same basic ideas to a single VET course.

Roles of monitoring, assessment and evaluation procedures

Since all quality approaches aim to identify and improve systems, processes and procedures that are inefficient/ineffective or are not producing the desired outcomes, there is a need to establish feedback loops that monitor systems, processes and procedures. The role of such monitoring was stressed in some of the case studies in *Signposts to quality*. This involved either the setting up of suitable information systems or the revision of existing information systems.

Ultimately, quality systems measure outcomes. The non-manufacturing case studies in *Signposts to quality* found that measuring their outcomes qualitatively and quantitatively was difficult. Nevertheless, this has to be done in ways that are statistically based and have a customer focus.

Finally, despite the earlier caution about the time needed to implement a quality system, a number of the case studies referred to the importance of early visible results. It was found that this was an effective way to demonstrate the value of a quality system and to increase staff awareness and commitment.

Lessons from the VET case studies

Given that we are in the early stages of quality initiative implementation in Australian VET, the lessons that can be drawn from the research so far are relatively meagre. In the VET sector itself, there are case studies of quality measures implementation for both whole institutions and more specific programs. The more global case studies deal with:

- whole organisation TQM initiatives (McEwan & Stenson 1995; *Signposts to quality* 1994, p. 25ff)
- whole organisation assorted quality initiatives (*Signposts to quality* 1994, p. 19ff., p. 30ff., p. 35ff., p. 40ff., p. 45ff.)
- introducing teachers/trainers to benchmarking (Montague & Evans 1996)
- best practice in office skills in a State system (Stewart 1995)
- customer needs/satisfaction survey (McGrath & Ball 1995)

The two TQM projects are in their very early stages, so that the documents are more about what is proposed to be done and why, rather than a report of what has been learnt from implementing a whole organisation TQM initiative. The other assorted whole organisation quality initiatives are also in their very early stages with the focus being on getting started. The most advanced initiative appears to be the self-managed work teams at the Gold Coast Institute of TAFE which was discussed earlier in this chapter. At least this case study confirms the suitability of self-managed teams for some parts of the VET sector, though it would be useful to have this confirmed further by similar success in some other VET sector organisations.

Perhaps the main lesson to be learnt from all of these whole organisation quality initiatives is the difficulty of getting started on an organisation-wide basis. It appears to be common for a small number of staff to have been working on the quality initiative for years without the organisation as a whole being moved very far at all.

Perhaps some of the difficulties experienced in starting up on an organisation-wide basis are reflected in the project introducing teachers/trainers to benchmarking. Montague & Evans (1996) aimed to trial process benchmarking in educational delivery in VET institutions. Thirty-four participants from a representative range of the VET sector attended a training session on benchmarking and then took part in at least one of ten 'benchmarking events'.

At these workshop 'events' participants sought to apply process benchmarking to a problem or issue that they chose themselves. The project had no scope or resources to follow up on what happened after that. The authors concluded that it was a very positive staff development exercise and that the participants would be more ready to take part in future change initiatives. However, they also acknowledged that any changes 'implemented by these teachers shortly after the benchmarking events are in themselves small' (Montague & Evans 1996, p. 61). Further, they concluded that what was achieved was not really benchmarking since too many of the 'essential constituents' of process benchmarking were absent. Overall, this pilot project served to emphasise the magnitude of the task of introducing large-scale quality initiatives.

Like the organisation-wide quality initiatives, the best practice in office skills in a State system project (Stewart 1995) is in its preliminary stage with the collection of a range of data in process. The customer needs/satisfaction survey (McGrath & Ball 1995) surveyed students at nine colleges located in three institutes of the TAFE NSW system on their needs, preferences and expectations. The prime aim is that this information will be used by the various colleges 'as a starting point for the targeting and developing of quality improvement projects and action plans' (McGrath & Ball 1995, p. 1).

In summary, the more global case studies represent a start, but in most cases there is a long way to go before major outcomes will be evident. In the meantime, each project is no doubt having its own local impact and increasing quality levels within the VET sector.

There are also case studies of quality measures implementation aimed at more specific programs. These include:

- performance on teaching and learning (Peoples 1996)

- course maintenance (Worsteling [ed.] 1995)
- flexible delivery (Anderson 1996)
- best practice in an Australian Vocational Training System (AVTS) work-based pilot program (Grosse & Pugh 1995)
- best practice in industry training advisory bodies (ITABs) (Leroux 1993)

These projects serve as examples of specific quality initiatives in the VET sector. They will no doubt lead to many more similar projects. They also reflect the wide scope for specific quality initiatives in the VET sector since there is not much overlap between any of these particular projects. Thus it is difficult to arrive at any cross-case study comparisons or conclusions.

The difficulty in drawing many definite conclusions from the research discussed so far in this section is due to a combination of three factors: the diversity of approaches to quality in the VET sector; the diversity of targets to which the quality measures have been applied; and the very preliminary nature of most of the projects.

Not surprisingly, the diversity of approaches to quality in the VET sector is also apparent in industry. In a series of major studies of the factors that influence decisions about training, Smith et al. (1994), Noble et al. (1996) and McIntyre et al. (1996) developed case studies that cover a diverse range of enterprises across five industries. They found that 'quality has different meanings in different industries, and the approach varies greatly across enterprises' (McIntyre et al. 1996, p. 62). In order to make some sense of this diversity, they usefully suggest that three levels of quality initiatives in enterprises need to be distinguished. These are:

- *Level 1:* awareness of need for quality (i.e. quality considered in response to other initiatives, e.g. training, new products)
- *Level 2:* specific quality initiatives (i.e. single quality programs, e.g. customer service, product finish, quality control)
- *Level 3:* integrated quality initiatives (i.e. pervasive initiatives, e.g. Total Quality Management, ISO 9000 accreditation)

Their research found that quality was one of the most important drivers of training. In the case studies for the construction, electronics manufacture, and food processing industries, many enterprises were undergoing Level 3 quality initiatives, while most of the remainder, particularly in the construction industry, were at Level 2. In the case studies for the retail and finance and insurance industries, 'customer service' was an important driver of training in all of the enterprises studied. However, Level 3 quality initiatives were not pursued in most of these enterprises.

Since these industries by and large are supposed to be further advanced in quality initiatives than the VET sector, the ambitious nature of the progress so far in the VET sector is evident. Much of the work discussed in this report is at Level 3 although, admittedly, mostly in preliminary stages. Quite a bit of work is occurring at Level 2 and this will only increase.

The industry research also made another interesting observation about the popularity of training courses in quality:

> *Training for quality is often focussed on shop floor employees and delivered on the job. This makes the training relatively short, sharp and cheap for enterprises—one reason why it is so popular with managers who perceive a high, potential return from relatively modest training outlay.*
>
> (McIntyre et al. 1996, p. 63)

This statement assumes the permanence of a hierarchical model of work organisation. One lesson from the quality initiatives so far in the VET sector is that they severely challenge these traditional hierarchies, e.g. widespread use of self-managed teams is likely.

Findings and directions for further research

Findings

While it is too early to be definitive about these matters, the most promising quality programs for the VET sector appear to be quality assurance, best practice and benchmarking, and self-managed teams. The quality matrix and TQM are other likely possibilities. Because of the recency of the introduction of formal quality programs into the VET sector, there is not much detailed sector-specific advice to guide the introduction of new quality programs. However, *Quality in action* provides general implementation advice for each of the main quality programs.

A major change, possibly *the* major change, over the last five years in the VET sector, is the growing interest in quality management practices. This surge in interest in quality is now being stimulated further by ANTA policies. However, research on these matters is still at a very preliminary stage. This is only to be expected. As the Australian Quality Council is fond of reminding us, 'quality is a journey, not a final destination'. Amongst other things, this implies that the timing of the adoption of some particular approach to quality is vital.

> *The quality principles and practices used by an organisation are never static; they are always evolving. With the exception of the quality matrix, the practices examined were introduced only when organisations were fairly well advanced in their quality initiatives.*
>
> (*Quality in action* 1995, p. 3)

Most of the research so far in the VET sector is developmental rather than evaluative, i.e. it is concerned with the business of setting up quality assurance measures rather than with judging how well they are operating. As the VET sector moves further along its quality journey, there will be a need for more critical research to evaluate progress. Until then our understanding of the state of this field is still very limited.

Directions for further research

Given that we are in the early stages of quality initiative implementation in Australian VET, there are no areas where it can be said that no more research is needed. However, some priorities for the VET sector can be suggested. These include:

- ways of effectively initiating organisation-wide quality initiatives

- 'best practice' applications of best practice and benchmarking
- uses of self-managing teams
- evaluative studies of quality initiatives, particularly those that have become established

It has been very noticeable in this review that nearly all of the research is on the publicly funded component of the VET sector. In an era where competition is being promoted, research on quality needs to take in the whole of the sector.

References

Anderson, G 1996, *Flexi learn: A case study of best practice in flexible delivery of vocational training*, Flexi Learn, Warwick College, Southern Queensland Institute of TAFE.

Anastas, N & Casey, D 1996, *National hospitality benchmarking project*, Regency Institute of TAFE, Regency Park, SA.

ANTA (Australian National Training Authority) 1994a, *Proposals for more effective implementation of training reforms*, Report to ANTA Ministerial Council, ANTA, Brisbane.

—— —— 1994b, *Towards a skilled Australia: A national strategy for vocational education and training*, ANTA, Brisbane.

—— —— 1995, *Annual national report vol. 3: Benchmarking VET—The performance of the vocational education and training sector in 1995*, ANTA, Brisbane.

Australian/New Zealand Standard 1995, *Quality system guidelines, Part 5: Guide to AS/NZS ISO 9001 for education and training*, AS/NZS 3905.5: 1995, Standards Australia, Homebush NSW/Standards New Zealand, Wellington.

Ball, J & Neville, S 1995, *Quality in action: Quality matrix, self-managed teams, benchmarking, re-engineering*, NSW TAFE Commission, Educational Development Division, Quality Unit, Sydney.

Barnett, K 1995, *Australian industry and enterprise training providers*, National Centre for Vocational Education Research, Adelaide.

Bishop, B, Gilchrist, M, Hockings, C & Jones, W 1995, *Striving for quality: Selected case studies of good practice in NSW adult and community education*, NSW Board of Adult & Community Education, Sydney.

Capper, C A & Jamison M T 1993, 'Let the buyer beware: Total quality management and educational research and practice', *Educational Researcher*, vol. 22, no. 8, pp. 15–30.

Frew, R 1994, 'Implementing quality means a change in culture', Proceedings of the fifth international conference of the Australasian Association for Institutional Research, Otago Polytechnic, Dunedin.

—— —— 1996, 'The assessment of organisational culture at the Sydney Institute of Technology', paper presented at the Educational Research: Building New Partnerships joint conference of the Australian Association for Research in Education and the Educational Research Association Singapore, Singapore Polytechnic.

Grosse, J & Pugh, R 1995, *Career pathways for work ready trainees: The implications of best practice*, Tasmanian Educational Consortium Ltd/DIRVET, Hobart.

Hampton, C 1995, *Development and implementation of best practice and benchmarking project*, Onkaparinga Institute of TAFE, Noarlunga.

Hinchcliff, J 1993, 'TQM: Is the emperor wearing clothes?', unpublished paper (copy held at NCVER).

Leroux, R 1993, 'Role of State ITABs in the VET sector: Best practice case studies', NSW Board of Vocational Education and Training, Sydney.

McEwan, D & Stenson, P 1995, 'Implementing quality: A post compulsory education and training case study', paper presented to the National Vocational Education and Research conference, Darwin.

McGrath, B & Ball, J 1995, *Customer service research study: What do our students think?*, summary report, NSW TAFE Commission, Educational Development Division, Quality Unit, Sydney.

McIntyre, J, Petocz, P, Hayton, G, Noble, C, Smith, A & Roberts, P 1996, *Final report: Enterprise training in Australia*, Office of Training and Further Education, Melbourne.

Macneil, J, Rimmer, M & Testi, J 1992, *Raising the standards—Benchmarking and best practice in Australia: Progress in the top 500 enterprises*, National Key Centre in Industrial Relations, Monash University, Melbourne.

Misko, J 1996, *Work-based training vol. 1: Costs, benefits, incentives and best practice*, National Centre for Vocational Education Research, Adelaide.

Montague, A & Evans, P 1996, *Benchmarking by teachers: Report of a study trialling process benchmarking in vocational education and training*, NSW TAFE Commission, Educational Development Division, Quality Unit, Sydney.

Moy, J (ed.) 1996, *Work-based training vol. 2: Case studies*, National Centre for Vocational Education Research, Adelaide.

New South Wales Board of Vocational Education and Training 1994, *Best practice in vocational education and training: Case studies vol. 2*, NSW Board of Vocational Education and Training, Sydney.

Noble, C, Smith, A & Gonczi, A 1996, *Enterprise training in Australia: Industry profiles and case studies*, Office of Training and Further Education, Melbourne.

Peoples, M 1996, *Quality of teaching and learning in the vocational education and training sector*, Canberra Institute of Technology/NSW TAFE Commission.

Robson, R 1995, 'Achieving world class performance through workplace change and the best practice demonstration program', paper presented to the Fifth National Workshop on Vocational Teacher Education, Launceston.

Smith, A, Hayton, G, Roberts, P, Thorne, E & Noble, C 1994, *Enterprise training: The factors that affect demand—Final report, industry profiles and case study analysis*, vols. 1–4, Office of Training and Further Education, Melbourne.

Stewart, R 1995, 'Quality assurance in vocational education and training: A work in progress report', paper presented to the National Vocational Education and Research conference, Darwin.

Technical and Further Education Commission (NSW) 1994, *Signposts to quality*, Corporate Marketing Services Branch, TAFE Queensland.

Whittingham, T 1994, 'Best practices in the use of information technology in education and training and the delivery of information technology education and training', Information Technology Training Division, TAFE NSW, Sydney.

Worsteling, B (ed.) 1995, *Course maintenance processes case studies*, State Training Board of Victoria/RMIT, Phoebe Publishing, Melbourne.

12 Evaluation of vocational education and training*

Rod McDonald
Geoff Hayton

What is evaluation?

THERE ARE TWO KEY FUNCTIONS of evaluation. At the core of evaluation is the concept of 'value', in that evaluation involves finding the 'value' or 'worth' of something (Scriven 1967). Evaluation has also come to mean the act of gathering information in order to make decisions about a specific program or aspect of education, and act on the information obtained (Stufflebeam 1971). We have included these two aspects in our definition of evaluation of vocational education and training (VET):

> *Evaluation of vocational education and training is the systematic investigation to assist those making judgements of the value or worth of a program or other aspect of vocational education and training, for the purpose of decision making.*

The evaluation may focus on the appropriateness, efficiency or effectiveness of vocational education and training.

---

* This chapter is a reprint of McDonald, R and Hayton, G 1997, *A brief history of the evaluation of VET in Australia*, Review of research, National Centre for Vocational Education Research, Adelaide.

In addition to these two key characteristics, evaluation is sometimes used to increase awareness of particular activities or promote greater awareness of the benefits of a program (Cronbach et al. 1980).

Evaluation and research

To sketch the current state of evaluation in vocational education and training, we firstly need to distinguish evaluation from other types of research and investigation, as the boundaries are not clear cut and the use of terms is not consistent in the field.

In contrast to evaluation, research involves conceptual or empirical investigations which contribute generally to our knowledge about vocational education and training (McDonald et al. 1992, p. 7). The core word here is 'generally'.

Evaluation, on the other hand, will always have a specific focus. It can have many purposes, ranging from guiding the development of policies, programs and practices (formative evaluation) to decisions on program continuation or accountability (summative evaluation). Systematic and timely evaluation can thus underpin changes in practice and important policy decisions. In other words, a properly designed program of evaluation helps to ensure value for money spent on vocational education and training.

The different purposes and outcomes of research and evaluation are highlighted by the many ways in which their processes differ. They differ in the way the problem is defined, in who makes key decisions, in the level of autonomy and the role of the investigator (see figure 1).

Development of evaluation theory and practice

There has been little development in evaluation theory in the last couple of decades. The initial conception of evaluation saw it

Figure 1: Evaluation and research—the traditional division

	EVALUATION	RESEARCH
Problem definition	Defined by evaluator with substantial input from stakeholders	Defined by researcher, perhaps with input from third-party funder
The place of the hypothesis	Problematic, possibly defined by the goals of the program being evaluated	Central to the study, determined by the researcher
Replicability	Duplication of a program site is usually not possible	Duplication of conditions is essential
Data to be collected	Negotiated between the evaluator and the other stakeholders	Determined by the researcher
Randomisation	Random assignment problematic and in many cases irrelevant or inappropriate	Random assignment to treatment/control taken as normal procedure
Autonomy	Evaluator is dependent upon funding agency for approval of report/findings	Researcher is (relatively) independent of funding agency in reporting
Nature of outcome	Generates a description of an activity which is intended to influence further iterations of that activity	Generates rules or principles which have general applicability but do not affect the object of the research
Role of investigator	Usually becomes identified in part with the objective of study; at some risk of becoming advocate/investigator	Distant, uninfluenced in conduct by interaction with object of study—a judge/investigator
Intended influence	Local, with greatest effect on iterations of the evaluated programs	General, and capable of being applied in differing circumstances

(reproduced from Robinson & Foyster 1996)

representing the assessment of gains caused by an education or training program—'the process of determining to what extent the educational objectives are actually being realised' (Tyler 1949). This was followed, after a while, by considerable theoretical development of the area in the 1970s. The conceptualisation of evaluation proceeded through the development of what were described as 'models' but which are more properly called 'approaches' (see for example the list in the next section), together with the development of evaluation standards (Joint Committee on Standards for Educational Evaluation 1981). Useful summaries of the theoretical development of evaluation are given by Nevo (1983) and Guba and Lincoln (1981).

In terms of its effect on evaluation practitioners, by far the most important theoretical development is the ground-breaking work by Parlett and Hamilton (1972). This altered the way in which evaluation was conceptualised, by signalling a change of focus from evaluation solely based on measuring inputs and outputs, to evaluation which studied the process of education and training as well.

In the higher education sector, the late 1970s and early 1980s saw the application of the principles of evaluation to teaching (but not to research). At around this time, the Australian Government signalled its view of the importance of evaluation by the establishment of the Evaluations and Investigations Program, which still continues almost 20 years later.

In the VET sector, there has been an extremely modest level of activity, which is disturbing in view of the large expenditure on vocational education and workplace training, estimated at $5.4 billion in Australia in 1991 (McDonald et al. 1992, p. 25). Evidence for the lack of evaluation is outlined in the next section. Over the past five years, there were only 98 published evaluations on vocational education, and four on workplace training (see table 1). In a recent survey of industry, only 48 per cent of worksites formally evaluated any training delivered in the past year (see table 2).

The dimensions of evaluation

Evaluations can differ in their focus, purpose, approach, methodology, and reporting. The following examples, by no means exhaustive, give some idea of the range of possibilities.

Focus:

- education or training body
- specific training program
- curriculum
- training materials
- individuals

Purpose:

- bring about improvements
- solve a problem
- find a problem
- monitor progress
- judge success

Approach (including core references):

- context-input-process-product (Stufflebeam et al. 1971)
- behavioural objectives (Tyler 1949)
- illuminative (Parlett & Hamilton 1972; Parlett & Dearden 1977; Kemmis 1980; Parlett 1990)
- goal free (Scriven 1973; Scriven 1972)
- expert (Eisner 1976)
- accreditation (Roe & McDonald 1984, pp. 125-131)
- adversary (Owens 1973; Popham & Carlson 1977; Thurston 1978)
- transaction (Rippey 1973)

Methodology:

- setting goals, reviewing needs
- developmental testing (Nathenson & Henderson 1980)
- validation
- participant feedback
- learning
- on-the-job analysis
- cost-benefit analysis (Levin 1983)

The last four steps above correspond approximately to the four-stage model which is much used in the evaluation of training programs (Kirkpatrick 1975).

Reporting:

- comprehensive evaluation report
- report to management
- newsletter or newspaper item
- note to training officers
- report to supervisors
- reporting back to participants

What constitutes a 'good' evaluation?

Remarkably little is written to enable those responsible for overseeing or interpreting evaluation to judge their worth. There are a number of guides to evaluation methods, but little on standards. The following checklist of questions (adapted from Roe & McDonald 1984) is suggested as a guide to the questions that need to be addressed in an evaluation, although not all will always be relevant.

Context	What are the major features of the context in which an evaluation is to take place which make that evaluation necessary or desirable?
Purpose	What are (i) the general, and (ii) the specific purposes of those requesting or sponsoring the evaluation and/or of those carrying it out? (Both these questions relate to the purpose of the evaluation.)
Climate	What are the attitudes among those involved in, or affected by, the evaluation which make for (i) a favourable climate, (ii) an unfavourable climate?
What information	What information will be sought in carrying out the evaluation? How are decisions about 'what information' affected by: the general context; the climate; the general and specific purposes; the audience(s)? Can the information sought be classified into, for example, 'sufficient', 'essential' and 'desirable'? Is it planned to seek any information

	which is interesting rather than useful? What are the realistic limits of the information which should be sought?
Information sources	Who and what are essential sources of information? Who and what are desirable but not essential sources?
Who evaluates	Who will collect evaluation information? How does this decision relate to the purposes of the evaluation and to its audience(s)?
When?	When will evaluation information be collected? What considerations of context, climate, purpose, and the nature of the information and its sources, affect this decision?
Methods	What methods or instruments will be used to collect evaluative information? Which of the foregoing questions help to determine the choice of methods and how do they affect the decision?
Processing of data	What will happen to the data, once collected? What are the appropriate forms for ordering, summarising, and presenting the information, and which methods of analysis will achieve that result?
Reporting	What factors in context, climate, audience(s), help to determine the appropriate forms for presentation of the information? How should it be reported, and to whom? Is there one single, identifiable audience to which the evaluation findings will be addressed, or are there two or more separate or overlapping audiences?
Confidentiality	Who will have access to what pieces of information? What steps will be taken to ensure confidentiality of those who provide information?
Implementation	What subsequent action should follow the reporting? Will there be findings to be implemented? How should they be implemented? Who will be involved in the implementation? If the findings do not suggest or imply any consequential action, what other consequences, if any, are anticipated?

Evaluating the evaluation

What steps will be taken to evaluate the evaluation? What is to be learned from this evaluation which will be useful for future evaluations? What can be built into the evaluation plan to ensure that any lessons are not lost or neglected?

State of evaluation in Australia

To obtain an overview of evaluation practice in vocational education and training in Australia, the following information sources were pursued:

- published reports and papers
- unpublished reports and papers
- interviews with vocational educators and trainers

The vocational education (VOCED) database provided the main source of information on published and unpublished reports and papers. However, it is in the nature of evaluation that the audience for the outcomes of many evaluation projects is very limited, so that the reports are often unpublished and not widely known. Thus, to obtain a more complete picture of evaluation practice requires direct contact with practitioners in vocational education and training.

A recent study of evaluation by the authors (McDonald et al. 1997) identified the distribution of published evaluation reports across various categories of evaluation in vocational education and training and across States/Territories. Table 1 shows the distribution of published evaluation reports across three broad categories and the two fields of formal vocational education and workplace training. The table is mainly based on information from McDonald et al. (1997, p. 6).

A feature of the distribution shown in the table is the low number of published evaluations of courses or training programs. In the case of TAFE, the main reason for this is the trend, in all States and Territories, away from ad-hoc in-depth evaluations of courses to systematic monitoring of course performance indicators (Guthrie

Table 1: Number of reports and books on evaluation published in Australia, 1991–96

	Formal vocational education (TAFE and other providers)	Workplace training (provided by employer)	Both vocational education and workplace training
Evaluations of courses/training	13	1	0
Evaluations of other aspects of vocational education	85	3	0
Reports and books on evaluation practices	10	9	8
TOTAL	108	13	8

1991). Most of the information on course performance sought by TAFE agencies requires routine processing of data already held on the computer systems of TAFE. The data is collected from various sources including enrolment forms, examination results, TAFE personnel records and financial records. Further information is collected through surveys of students, graduates and employers to identify student destinations, student satisfaction and industry satisfaction. The performance indicators approach is relatively easy and inexpensive. It appears to have replaced traditional course evaluation approaches in most areas of formal vocational education in Australia and similar practices are reported overseas (Hoachlander et al. 1992, pp. 8–9; Barnett 1994, p. 165).

In the case of workplace training programs, only one published evaluation of training in Australia was found. It appears that any evaluations undertaken are rarely reported outside the enterprise. A recent survey of enterprises and series of case studies in Australia (McIntyre et al. 1996; Hayton et al. 1996; Smith et al. 1995) provided some information on the extent of implementation of evaluation of workplace training. The study revealed that evaluation of training is relatively undeveloped in most enterprises across the industry sectors. Despite the evident commitment to training by most enterprises, there was a conspicuous lack of attention to the impact of training on productivity or profitability. The typical approach to evaluation consists of the distribution of evaluation questionnaires —described as 'happy sheets' by some trainers—at the end of training sessions. There was little evidence of follow-up to evaluate whether training produced the expected benefits. Similarly, none of the case study enterprises attempted to measure the full costs or benefits of training.

The survey indicated that 48 per cent of worksites formally evaluated any training that was delivered in the past year, but the percentage varies considerably with size of enterprise (see table 2). There were few differences among the industry groups, with the size of the worksite making a much greater difference to whether the worksite formally evaluated training.

Table 2: The extent of use of workplace training evaluation: How many evaluate any training delivered?

	Small worksites (n=714)	Medium worksites (n=525)	Large worksites (n=521)	All worksites (n=1760)
	223	269	346	838
	31%	51%	66%	48%

Source: Hayton 1996, p. 182

For evaluations other than courses, 88 reports on evaluations of vocational education and training in Australia over the past five years were found. These mostly covered aspects of TAFE provision, including evaluations of TAFE management systems, teaching facilities, learning materials, assessment methods and educational processes and schemes. These evaluations varied greatly in method and scope. Most reports did not give a clear and full explanation of the evaluation method used, and did not indicate the theoretical basis of the evaluation approach.

At a national level, the most comprehensive summary of policy-oriented evaluation studies is contained in a review published by the Australian National Training Authority (ANTA 1996). This summarises major reviews (The Review of the ANTA Agreement, *Successful reform*, and the Review of Implementation of Performance Measures in VET), as well as a number of evaluations of ANTA-funded projects.

State of research into evaluation

In Australia over the past five years, 27 reports, books or research papers were found on evaluation practices. Only six reports analysed current evaluation practices in vocational education and training and this probably reflects the lack of much research on evaluation in Australia. The lack of research could reflect the trend away from local evaluation of courses towards centralised performance indicator monitoring in TAFE in Australia. The remaining reports or books provided guides to evaluation methods, with eight publications covering methods of evaluation for both vocational education and workplace training. Of the remaining guides, the majority were primarily oriented to formal vocational education at TAFE, rather than workplace training.

The recent literature in North America and Europe on evaluation research shows a similar pattern to Australia of lack of publications on evaluation research. Journals of research and evaluation in education in recent years have many general research articles but very few on evaluation. There is little development of evaluation theory in recent years. Apparently the level of interest in evaluation in the 1970s has not been maintained in the 1990s. In part, at least, this can be attributed to a reduction in funding for full-scale evaluation projects (Stronach et al. 1996), leading to the use of 'quick and dirty' methods such as student feedback surveys, course monitoring and quality audits.

Only few writers have noted the trend away from the practice of full evaluation of courses and programs in vocational education and training. Some have criticised the use of cheaper and more 'bureaucratic and technicist' methods of quality assurance and accountability like the use of performance indicators (Barnett 1994). Others assert that performance indicator systems should complement periodic local evaluations of courses and programs (Hoachlander et al. 1992, pp. 8–9).

Findings and directions for further research

Three issues arise from our survey of the current state of evaluation in VET in Australia. These are outlined below, together with suggestions as to how a national strategy might remedy the shortcomings. They incorporate the suggestions for an evaluation protocol previously developed by ANTA (1996).

Theory base

Internationally, the theoretical base of the study of evaluation has not moved during the last decade in the way that it did during the 1970s; the 1980s and 1990s have been a time for consolidation and application rather than innovation. For example, in a recent useful review of evaluation (Athanasou 1995), over two-thirds of the references were to papers prior to 1980.

In the VET sector, however, there appears to be little or no understanding of even the theoretical base developed in the 1970s; it is common to find evaluations that:

- are unclear as to their approach and theory base
- do not contain both description and judgment, both of which are required in an evaluation (Stake 1967)
- do not explain the relationships with other approaches to evaluation currently in use in the institution—particularly performance indicators and quality assurance mechanisms

There is also relatively little easily accessible material to guide practitioners in conducting an evaluation which will be both useful and cost effective. A series of articles for workplace trainers published in *Training and development in Australia* some years ago did this (McDonald & Bishop 1990; Newman 1990; Newman 1991); but, again, evaluation tends not to be a major focus of practitioner journals.

Recommendations for a national strategy:

- development of a program of training and associated support materials (based partly on existing materials) to enable practitioners to carry out competent micro-level evaluations

- development of a graduate certificate, to be offered nationally, for those in policy areas either overseeing evaluations or interpreting evaluative information
- commissioning of articles on evaluation, including examples of useful approaches to evaluation, for publication in practitioner journals
- theoretical and practical development of the relationship between local evaluation and centralised performance indicators and quality assurance mechanisms

Policy focus

Evaluation, like research, has not been used to provide the support that it could to those framing policy:

- VET policy has, in the past, tended to be formed at a rate that made evaluative input impossible.
- Only rarely do evaluations include analysis of cost-benefit issues (see for example McDonald 1995).
- Results of the evaluations are rarely made available in a form which will facilitate their use by those framing policy.
- Policy issues which are more difficult to resolve are often avoided in evaluation projects.

What is needed is a better blending of research and evaluation, which might lead to a more creative use of the results of both. There is also a need for State training systems to make better and more systematic use of evaluations. For example, the Victorian State Training Board has established an evaluative studies and review program which is designed to 'provide data and analysis to back up the State Training System's planning for, and delivery of, education and training services' (Monie 1992).

Recommendations for a national strategy:

- inclusion of a specific requirement that evaluation reports address both cost-benefit issues and policy implications wherever relevant

Evaluation of the 'big' issues

There has, to date, been relatively little systematic evaluation of the 'big' issues in VET, for example:

- the performance of the VET system
- the impact of competency-based training on both learning and productivity
- the impact of workplace learning programs on job performance and organisation performance

Recommendations for a national strategy:

- development of a program of evaluation to systematically review major VET initiatives, containing both summative and formative elements

In conclusion

Evaluation in VET in Australia has been a sporadic activity: carried out in some form on some occasions, not used to evaluate the 'big' issues, and rarely used as a tool in policy formation. The evaluation studies that have been carried out tend to use only a fraction of the available perspective, and do not connect with current quality assurance mechanisms. To use a 'stocktake' analogy, the key is rusted in the stockroom lock, one or two employees are working away, but the shelves are rather bare except for some boxes of old stock that will be difficult to move.

Evaluation, however, can be an important tool for those framing policy and in the daily work of practitioners. Initiatives to improve its quality are needed at all levels and the recommendations are designed to ensure that evaluative techniques make their proper contribution.

References

ANTA (Australian National Training Authority) 1996, *Review of evaluations of the national vocational training system*, unpublished report, Brisbane.

Athanasou, J 1995, 'Issues in the evaluation of adult education', in *Understanding adult education'*, ed. G Foley, Allen & Unwin, Sydney.

Barnett, R 1994, 'Power, enlightenment and quality evaluation', *European Journal of Education: Research, Development and Policies*, vol. 29, no. 2, pp. 165–179.

Cronbach, L, et al. 1980, *Toward reform of program evaluation*, Jossey-Bass, San Fransisco.

Eisner, E 1976, 'Educational connoisseurship and criticism: Their form and functions in educational evaluation', *Journal of Aesthetic Education*, vol. 10, no. 3 & 4, pp. 135–150.

Guba, E & Lincoln, YS 1981, *Effective evaluation*, Jossey-Bass, San Fransisco.

Guthrie, H 1991, *Performance indicators revisited*, National Centre for Vocational Education Research, Adelaide.

Hayton G 1996, 'Management of workplace learning', in *Management of educational change: A case-study approach*, ed. P Oliver, pp. 169–186, Arena, Aldershot, UK.

—— —— McIntyre, J, Sweet, R, McDonald, R, Noble, C, Smith, A, & Roberts, P 1996, *Enterprise training in Australia. Final report*, Office of Training and Further Education, Melbourne.

Hoachlander, G, Levesque, K & Rahn, ML 1992, *Accountability for vocational education: A practitioner's guide*, National Center for Research and Vocational Education, Berkeley, Ca.

Joint Committee on Standards for Educational Evaluation 1981, *Standards for evaluations of educational programs, projects and materials*, McGraw-Hill, New York.

Kemmis, S 1980, 'Program evaluation in distance education: Against the technologisation of reason', *Open Campus*, vol. 2.

Kirkpatrick, D 1975, *Evaluating training programs*, American Society for Training and Development, Washington DC.

Levin, H 1993, *Cost-effectiveness: A primer*, Sage, Beverly Hills, Ca.

McDonald, R 1995, *Costing training and assessment. Issues paper*, Assessment Centre for Vocational Education, NSW TAFE Commission, Sydney.

—— —— & Bishop, R 1990, 'Conducting a training audit: 2. Throw away the happy sheets', *Training and Development in Australia*, vol. 17, no. 4, pp. 17–24.

—— —— Hayton, G, Gonczi, A, & Hager, P 1992, *No small change: Proposals for a research and development strategy for vocational education and training in Australia*, University of Technology, Sydney.

—— —— Hayton, G & Melville, B 1997, *Evaluation of vocational education and training: Annotated bibliography*, Australian National Training Authority, Brisbane.

McIntyre, J, Petocz, P, Hayton, G, Roberts, P, Noble, C & Smith, A 1996, *Enterprise training in Australia: The national enterprise training survey*, Office of Training and Further Education, Melbourne.

Monie, P 1992, *Evaluative studies and review program*, unpublished paper, Office of Training and Further Education, Melbourne.

Nathenson, M & Henderson, ES 1980, *Using student feedback to improve learning materials*, Croom Helm, London.

Nevo, D 1983, 'The conceptualisation of educational evaluation: An analytical review of the literature', *Review of Educational Research*, vol. 53, no. 1, pp. 117–128.

Newman, M 1990, 'Conducting a training audit: 1. Taking stock', *Training and Development in Australia*, vol. 17, no. 3, pp. 25–29.

—— —— 1991, 'Conducting a training audit: 3. People and places', *Training and Development in Australia*, vol. 18, no. 2, pp. 33–38.

Owens, T 1973, 'Educational evaluation by adversary proceeding', in *School evaluation: The politics and the process*, ed. ER House, McCutchan, Berkeley.

Parlett, M 1990, 'Illuminative evaluation', in *The international encyclopaedia of educational evaluation*, eds HJ Walberg & GD Haetrel, pp. 68–73, Pergamon Press, Oxford.

—— —— & Hamilton, D 1972, *Evaluation as illumination: A new approach to the study of innovatory programs*, Occasional paper no. 9, Centre for Research in the Educational Sciences, University of Edinburgh. (Reprinted in Hamilton et al. 1977)

—— —— & Dearden, G 1977, *Introduction to illuminative evaluation*, Pacific Soundings Press, Cardiff-by-the-Sea, Ca.

Popham, W & Carlson, D 1977, 'Deep dark deficits of the adversary evaluation model', *Educational Research*, vol. 6, no. 6, pp. 3–6.

Rippey, R (ed.) 1973, *Studies in transactional evaluation*, McCutchan, Berkeley.

Robinson, C & Foyster, J 1996, 'Bringing vocational education and training research and evaluation closer together', paper delivered at the national seminar Evaluation of the Vocational Education Training System, Ryde College of TAFE, November 1996.

Roe, E, & McDonald, R 1984, *Informed professional judgment. A guide to evaluation in post-secondary education*, University of Queensland Press, Brisbane.

Scriven, M 1967, 'The methodology of evaluation', in *Perspectives of curriculum and evaluation*, eds R W Tyler, R M Gagné & M Scriven, Rand McNally, Chicago.

—— —— 1972, 'Pros and cons about goal free evaluation', *Evaluation Comment*, vol. 3, no. 4, pp. 1–4. (Reprinted in Hamilton et al. 1977)

—— —— 1973, 'Goal-free evaluation', in *School evaluation: The politics and the process*, ed. ER House, McCutchan, Berkeley.

Smith, A, Hayton, G, Roberts, P, Thorne, E & Noble, C 1995, *Enterprise training in Australia: The factors that affect demand*, Office of Training and Further Education, Melbourne.

Stake, R 1967, 'The countenance of educational evaluation', *Teachers College Record*, vol. 68, pp. 523–540. (Reprinted in Hamilton et al. 1977)

Stronach, I, Allan, J & Morris, B 1996, 'Can the mother of invention make virtue of necessity? An optimal deconstruction of research compromises in contract research and evaluation', *British Education Research Journal*, vol. 22, no. 4, pp. 493–509.

Stufflebeam, D, et al. 1971, *Educational evaluation and decision-making in education*, Peacock, Itasca, Il.

Thurston, P 1978, 'Revitalizing adversary evaluation: Deep dark deficits or muddled mistaken musings', *Educational Researcher*, vol. 7, no. 7, pp. 3–8.

Tyler, R 1949, *Basic principles of curriculum and instruction*, University of Chicago Press, Chicago.

13 The impact of research on vocational education and training decision-making[1]

Chris Selby Smith

Introduction

THIS REVIEW OF literature is part of a broader study (Selby Smith et al. 1998) to review the evidence for and, where possible, evaluate the extent of influence of research on decision-making in vocational education and training (VET).

We know from studies of the use and impact of research—both within education and in similar areas—that the relationship between research and its outcomes is almost always complex and not easily discerned. It is important to note that in undertaking this review, we did not expect to detect easily the impact of particular pieces of research. Further, we anticipated that the impact of research would often be indirect rather than direct; delayed rather than immediate; often minor individually, but more substantial taken together; and a combination of specific information with skills and attitudes developed through involvement in research.[2]

Our approach is framed by two considerations. First, the perspective on research impact is that of decision-making rather than that of research. Secondly, the factors which affect the use and influence of research in decision-making lie in three areas:

- within the relevant decision-making systems
- within the research system
- within the web of linkages

which serve to transmit research outputs to decision-makers and the needs of decision-makers to the research system. The review of the literature is organised by reference to these considerations.

The chapter is organised in five sections of which this introduction is the first. The second section, 'Decision-making' reviews literature related to decision-making. The research settings are the focus of the third section 'Research settings'. The fourth section, 'Linkages' considers the literature relating to linkages. Finally, some conclusions are drawn in the fifth section 'Findings from the literature review'.

Decision-making

The widespread acceptance that research rarely has a direct impact on decision-making (the simple, linear, one-study-to-one-decision approach) has led commentators to look carefully at decision-making processes and the functions of research in them.[3] Anderson and Biddle (1991) have provided an edited selection of earlier literature on the nature of social research and the ways in which it interacts with policy and practice in education.

In the literature many contributors have emphasised the information role of research, but others pose an enlightenment function: 'researchers bring not so much discrete findings as their whole theoretical, conceptual and empirical fund of knowledge as one input into the decision-making process' (Weiss & Bucuvalas 1980: see also Sabatier 1987). Similarly, Klein (1990) comments that research can offer 'new ways of conceptualising the world and mapping the decision-making terrain, as well as challenging conventional assumptions'.

Two other points are noted here. First, there are different stages in the policy process and research can impact on decision-making differently at the various stages. Palmer and Short (1994), for example, have argued that there are five stages in the policy-making process: problem identification and agenda setting; policy formation; adoption of the policy; policy implementation; program and policy evaluation. In an ideal policy environment evaluation is likely to be incorporated into the implementation process, so that both the implementation process and the policy outcomes are evaluated (with appropriate feedback). The study by Anderson and Scott (1997), for example, examines the use of research to assist policy implementation, arguing that 'when time is short, the policy specialist becomes the researcher and the role of the research consultant becomes one of working side by side with the policy specialist'.

Relatedly, Rist (1994) has argued that there are two levels of decision-making in the policy arena: the establishment of the broad parameters of government action (when 'policy research input is likely to be quite small, if not nil'); and when concern focusses on translating policy intentions into policy and programmatic realities (where 'there are possibilities for the introduction and utilisation of policy research'). Rist considers three phases of the policy cycle (policy formulation, policy implementation and policy accountability), each of which 'has its own order and logic; its own information requirements; and its own policy actors'. Rist concludes that there is only a limited degree of overlap among the three phases, suggesting that they merit individual analysis and investigation.

Secondly, the Organisation for Economic Co-operation and Development (OECD) has suggested that the balance between governmental and individual responsibility for learning and adjustment to change, including new information, has been altered by recent theoretical developments (OECD 1994a, 1994b). The shift in assumptions away from neoclassical economics towards more realistic industrial organisation assumptions favours policies that remove imperfections in the labour market and leave more choice and responsibility to the individual (see also Carnevale 1995).

Research as information

Information is a key input into the making of policy and social science research has become a major supplier of it. Some argue that research provides new and better information; others that it is 'more rational information'; or that the quality and accuracy of knowledge based on research is better than that obtained from 'reactive data gathering'.

There are counter arguments, however: for example, a number of writers have noted the 'incomplete' nature of much of the research-based information, at least from a decision-maker's perspective (Harmsworth 1997). In addition, 'many decision-makers have been immersed in the substance of program and policy issues for decades. They have rich first hand experience and many sources of direct information. The contribution that social research studies can make seems marginal at best' (Weiss 1986). The information provided by research may be seen as incomplete in terms of its scope and the power of its explanations (Harmsworth 1997). It is often specific in terms of time and place. It can also be seen as incomplete because it is ill-timed and ambiguous in terms of its prescriptions and diagnoses (Klein 1990). Brown (1991) concludes that the most important policy choices depend upon public sensibilities that are beyond the power of research to shape; '(research-based) knowledge can only carry society so far'.

The balanced view, it is argued, is to regard information derived from research as one of a number of sources of information available to decision-makers and information from all sources as only one of many inputs into the decision-making process. Hall (1993b) concludes that 'in Australia, there is a plethora of reports, a great deal of opinion and a bit of research, some of which has policy implications'. Brown comments:

> *on a good day, ideas [information] may gain a hearing amidst the swirl of political considerations, but it must be a very good and rare day indeed when policy-makers take their cues mainly from scientific knowledge about the state of the world they hope to change or protect.* (Brown 1991)

Categories of research information

Of course, the information provided by research is not undifferentiated. It can be categorised according to the role it might play in the decision-making process, by the type of research and according to its disciplinary focus. Brown (1991) has identified three main *roles* for research in decision-making: it can document, gather, catalogue and correlate the facts that describe the state of the world; it can analyse and show what does and does not work (and why); and it can prescribe solutions to problems. Furthermore, some roles are more useful in the decision-making process than others. Brown's view is that, at least from the United States (US) experience, research has tended to be most directly of value in documenting the system, more erratically useful as analysis and least effective in prescribing solutions to concrete problems.

Rist (1996) argues that research on education might usefully investigate when and why a particular policy instrument should be chosen in preference to another. The Steering Committee for the Review of Commonwealth/State Service Provision (1997) noted the research contribution to policy development via 'the big ideas'. The report examined case studies on three reforms:

- a shift to purchasing of community services in South Australia
- output-based funding of public acute inpatient hospital care in Victoria
- competitive tendering and contracting of prisons in Queensland

The focus of the case studies was on how the reforms were implemented; why each option was chosen; and how those decisions affected the reform. However, it was clear that ideas, the accumulating body of knowledge and research over a considerable period, had substantially influenced the three reforms.

Finch (1986) distinguishes between *types* of research and makes claims about which has had the greater use. Finch differentiates between qualitative and quantitative research and claims that in the United Kingdom (UK) qualitative research has had less impact than quantitative research. She argues that decision-makers find statistics and quantitative research more useful, for it leaves control in the hands of policy-makers. Hall (1993b) has emphasised the strong statistical base for VET research, policy and practice in Australia. Hirsch (1996) reported a wide consensus at a recent OECD conference that quantitative indicators can be important for the understanding of educational systems.

Fox (1990) argues that certain *disciplines* have tended to be used more often in decision-making: which disciplines, he argues, depends upon the current values of policy-makers. Fox claims that in the United States of America (USA) during the 1980s, research based on 'economising' values (i.e. 'research based on economic reasoning but embracing some other considerations') tended to be used more often than, say, research based on social conflict or collective welfare approaches, 'because it was consistent with the values held by the most influential people in American politics'. Similarly, Brown (1991) notes that research results from the 'dominant persuasions', the economists, technocrats and planners, are used more often than the research of sociologists, anthropologists and historians who tend to 'stand on the sidelines'. However, Anderson and Biddle (1991) argue that social psychology, sociology and anthropology (and occasionally history, political science and economics) are the social science disciplines which have had the greatest impact on education.

These studies focus on the information role of research in decision-making, but what of the decision-making process itself? Ham and Hill (1984; see also Ham 1997) have argued that the study of social policy-making should concentrate on analysing three areas:

- the actors' assumptive worlds
- the formal policy process
- the distribution of power

Later studies have adopted a broadly similar approach and have sought to understand how factors in each of these areas affect the use of research information.

A distinction has been drawn between research outputs, that is new 'knowledge' or raw 'information'; and that which is transferred into the decision-making process, that is 'learning' or 'useful knowledge' (Evans 1986; Lomas 1990). Evans sees 'learning' as the evolution of assumptions and beliefs. Their approach is that the impact of research information depends essentially on its ability to change relevant audiences' beliefs or policy assumptions: core values (akin to ideologies and highly resistant to change) filter the types of message that find resonance with the currently held set of beliefs. For research information to be transformed into useable knowledge, the values underlying the research need to be congruent with the values of the relevant audiences. Pusey (1991) investigates the background, values and operating assumptions of senior executives within the Australian Public Service (APS), while Matheson (1997) discusses how information is used in the APS.

This general approach can be differentiated in a number of ways. First, the involvement of powerful sponsors or 'champions' who identify with the research results and indeed with the researchers tends to increase the likelihood that research will have an impact on decisions. As Weller (1996) notes, 'Every area of reform needs a champion committed to its progress'.

Secondly, if a group which is the subject of a research study (for example, teachers, Aboriginals or trainees) identify with the researchers the resulting recommendations are more likely to be acted upon, especially if the subject group is involved in the implementation process. This was a point made by the National Board of Employment, Education and training (NBEET 1994).

Thirdly, Klein (1990) argues that if values are congruent then the research results are more likely to be used, whether or not the results are ambiguous. Strong unambiguous findings can be closed out by decision-makers, especially if there is a strong consensual counter-wisdom among the relevant policy-making constituency or audience. Of course, absolutely unambiguous findings from research or evaluations on VET issues may be the exception rather than the rule, especially in relation to contested issues.

Finally, participants in the decision-making process tend to use findings selectively in their own interest. Information can find resonance if an opponent can be disadvantaged (or persuaded) or the heat taken out of a contentious issue. Group or individual values may predispose the decision-maker towards particular information, towards particular staff or towards particular processes (Weiss 1989).

The formal policy process, including institutional arrangements, can influence the process of resonance between research results and the core values and beliefs of decision-makers. Lomas (1990) contrasts the history of decision-making at the individual, administrative and legislative levels in Canada with that found in Britain and the US on the grounds that different institutional arrangements result in distinctly different patterns of audiences for policy research. Whitney (1996) argues that the lack of a federal structure and small size are among the factors which influence the impact of research on educational policy in New Zealand. The values and beliefs of various audiences are important both as the target to be influenced by research information and as a determinant of the types of research that are made available or can gain access to the audience.

In Australia, the federal system of government has an important influence on institutional arrangements generally and in VET (Robertson & Beresford 1996). The division of responsibilities between levels of government can prevent the generalisation of a study's impact or mean that no overall authority governs the adjustment process. Further, if different States and Territories have different value and belief systems it can mean that research studies have to 'change beliefs and policy assumptions at numerous locations in the decision-making structures before any substantive impact can be seen' (Lomas 1990). Also, within any given level of government, either at the State or Commonwealth level, there are continuing changes in the division of functions between departments and agencies and high turnover in staff at all levels of the relevant bureaucracies. This makes it difficult to determine where different types of research might best be targeted.

Governmental decision-making is a highly complex and interactive set of processes. It involves many actors and a multiplicity of decisions to act or not to act, determined often in a number of agencies or in large organisations where responsibility for the various levels of decision-making is widely distributed (Weller 1996). Key stakeholders, including professional, union and industry groups, often have an input into these decision-making processes; their input is related to the distribution of power among them, and may affect the extent to which research is used (indeed, which researchers have audience).

Palmer and Short (1994) have argued that analysis of the concepts of power and interest indicate that issues may not reach the policy agenda. This is because the agenda is controlled by those who have an interest in retaining the *status quo*, and perhaps because in some cases those who would stand to benefit from changes in policy and practice accept the *status quo*.

Thus, a set of objective conditions is not by itself sufficient to explain why particular problems or issues are defined as problematic and worthy of research. The studies chosen and the way in which research is undertaken can provide opportunities for particular interest groups to affect the organisation, delivery and perceptions of VET policies and programs. Wiseman (1978) advanced certain criteria influencing the choice of topics for detailed research from a rationalist perspective, such as the size of the issue, its future implications and the political setting. Other British writers have argued that potential issues for study must pass three tests if they are to survive: to command attention, to claim legitimacy and to involve action (for example, see Ham 1985). Milward and Laird (1996) identify issue characteristics that might affect the agenda success of an issue:

- the issue is dramatic
- the issue is driven by demographics
- the issue is driven by an increase in the problem
- the issue has no credible opposition (noting that issues can be driven by public opinion and can be changed by the length of time they are on the agenda)

Another aspect is that decision-making tends to be fragmented in large organisations; it is only at the apex, at very senior levels, that a capability exists for formulating priorities across the board. However, at these levels officials generally have a range of other demanding responsibilities and may not have sufficient time to devote to particular problems and their possible solutions. Given the pressure they are generally under, the 'window of opportunity' for VET decision-making is often quite short in practice. This makes it more difficult for researchers interested in public sector decision-making to target their independent research in a timely way.

The issue attention cycle can also involve substantial fluctuations in the intensity of public concern with particular issues and rapid shifts from one issue to another (Downs 1972). Vocational education and training, because of its media potential and relevance to a broad section of the community, may be more than usually susceptible to this phenomenon (compared with some other areas of governmental decision-making). This can place considerable obstacles in the path of VET research being effectively linked to policy and practice. See also Schon (1971) who argued that there are more policy ideas than can ever be dealt with; so which ideas are dealt with, and why? Peters and Hagwood (1985) examine the approach retrospectively.

Finally, it should be recognised that it does not automatically follow that a change in policy will result in a change in practice or improve the educational outcomes for VET participants. A UK study has concluded that:

> *what emerges with force is that a seemingly 'well-designed' central policy even when matched by resources is not sufficient to ensure implementation if it challenges the motivations and inclinations of those who carry it out locally.* (Lee & Mills 1982)

For example, VET providers and those working in them may be reluctant to abandon methods that are in place and whose replacement might have significant consequences in terms of status and the need to retrain, as well as changes in capital equipment and infrastructure. Lipsky (1980) showed that people at the grassroots will either ignore or deliberately thwart government policies if they believe that honest efforts to implement them will make their lives impossible. Implementation is likely to be more extensive if key groups and individuals have previously been made aware of the developing evidence for change and the costs and benefits of alternative courses of action. Close and ongoing linkages with research personnel throughout the research process would facilitate this situation.

Other research inputs into decision-making

Selby Smith et al. (1998) have noted that there are research inputs other than information into decision-making, notably research skills and attitudes, and trained personnel. These inputs have received less attention in the literature than those concerned with information. However, it can be argued that factors similar to those discussed in relation to research information will also influence the use of research skills and attitudes and the use of trained personnel in decision-making. Illsley (1988) has argued that when a body of knowledge exists, is accepted and used in practice, it is likely to be the background against which decisions are reached (whether consciously or unconsciously). Thus, it provides positive or negative experiences and evidence for or against alternative courses of action. The larger that body of knowledge and the more it is put into circulation, the greater its effect is likely to be.

Just as decision-making favours particular categories of research information, so it may select persons trained in particular disciplines, e.g. economics, education or law, or having particular skills, such as quantitative skills. Clearly, the skills of the available trained personnel need to be related to the perceived requirements of decision-making if they are to make their most effective contribution. Of course, the patterns of disciplines and skills may vary between organisations according to their responsibilities and functions. For example, the separation of policy-making and program activities may result, in the VET sector, in different concentrations of, say, administrators and educationalists in different organisations. One implication is that the particular institutional arrangements may limit the effectiveness of personnel, perhaps particularly where the institutional arrangements do not work smoothly at the point of organisational interaction.

Decision-making in VET in Australia

The same broad framework—that policy development can be analysed by reference to three elements, the formal policy process, the distribution of power among stakeholders and the assumptive world of the key players—has been used specifically to analyse VET decision-making in Australia (Selby Smith & Selby Smith 1998). It was noted that it was how these interactions were played out that determined the policy outcomes and the role that research played in the decision-making process.

An example of the simplest case is an initiative from one minister and department, with sole responsibility for policy development and implementation, and involving one level of government only. Even here, there can be a range of players (the functional department, finance, Premier and Cabinet, etc. and external stakeholders) and their interactions need not be straightforward. In VET, these interactions are more complex. At least four factors were identified as contributing to this complexity.

First, the Australian National Training Authority (ANTA) Agreement makes for complicated patterns of interaction in the development of VET policy. ANTA—the ANTA Board—is neither a State/Territory nor a Commonwealth body. It provides advice to a Ministerial Council which includes all relevant State, Territory and Commonwealth Ministers. The balance of power and influence between these parties is not necessarily settled and the boundaries between 'operational responsibilities' and 'national policy' can be contentious. VET remains contested territory.

Secondly, there are interactions between VET policy processes and the broader policy approaches and stances of each of the parties to the ANTA Agreement. These patterns can, indeed do, vary between the States and Territories. For example, a State or Territory may decide to support administrative rather than market reforms; to go slow on micro-economic reform rather than pursue reform actively; or to take different approaches to public sector financial and management arrangements. These discussions tend to be 'whole of government' rather than VET specific.

Thirdly, there are complex patterns of interaction in terms of the power relationships of the key VET stakeholders. Recently business has assumed a more powerful position. The Liberal Party pre-election platform (Liberal Party of Australia 1996) indicated that 'we will ensure that industry plays a central role in driving the national training agenda and that training more closely reflects industry needs' and that a Liberal Government would replace the existing arrangements 'with an industry and enterprise driven training system'. Of course, patterns of interaction between the key stakeholders can change comparatively quickly.

Finally, there are differences in the assumptive worlds—the experiences, values and beliefs—of the key participants in the VET decision-making processes which affect the interactions between them. For example, one world view sees training as an end in itself, while another sees training as a contribution to the enhanced competitiveness of enterprises and the development of individuals. In this regard there is a substantial difference between the assumptive world of the industry partners, including enterprises, trainees and unions, and the assumptive world of the educators, especially among public providers (perhaps less so among the private providers and the industry trainers). Another world view still focusses on technical and further education (TAFE) rather than VET. There are also personal differences, which in this relatively small policy-making community can influence significantly the patterns of interaction and have important practical consequences for VET.

At the State level Goozee (1994) has noted that the NSW Board of Vocational Education and Training has been both a generator and supporter of research; and a major consumer of research. The Board's involvement in research and development is closely related to its functions. It includes the co-ordination of NSW submissions for interstate and co-operative projects and national project funding, management of national projects and initiation of research related to current national and State policy and planning issues. The main areas of the Board's research and development activities at that time were related to: State and national planning; quality; policy development; labour markets; expanding the training market; equity; and regional advisory structures. Similar arguments apply in other States and at the national level. See also Harmsworth (1997) who contrasts policy-makers ('busy, pragmatic, political, incremental and focussed on real world concerns') with researchers ('reflective, rigorous and removed from system management'). He stresses four other aspects:

- Policy-makers are traditionally driven by ideology, whereas researchers are sceptical.
- Policy-makers work at the macro level, whereas researchers are more often focussed at the single issue level.
- Policy-makers typically have limited levers to pull, whereas researchers identify uncomfortable complexities.
- The long lead times between policy and practice mean that the agenda may have moved on before any investigative evaluation takes place.

Decision-making at the practitioner level

The OECD (1996) has noted that devolution in decision-making in education has multiplied the points at which knowledge is needed. In this context, knowledge needs to be transmitted to multiple actors and to be disseminated from one part of the system to another, rather than merely being passed from a single set of researchers to a single Ministry. Teachers are increasingly requiring the capacity to take note of and respond to evidence from a variety of sources, including research, development, innovation and evaluation. In a decentralising system, moreover, the line between the producers and consumers of knowledge becomes ever more blurred.

In Australia, the National Board of Employment, Education and Training (NBEET 1994) has argued that professional development should be viewed as a continuum consisting of the initial or pre-service preparation of teachers, their induction into teaching as a career and their continuing professional growth during their career. They promote the idea of the education provider as 'an educative workplace/learning community for all those who work there'; and give attention to the most appropriate mix of institutional and workplace learning for teachers. (Table 2 in this NBEET report is a useful summary of conditions which can act to facilitate or inhibit workplace learning by teachers, including knowledge, culture and leadership: the report also includes an extensive bibliography.)

They emphasise that a significant proportion of the workplace learning of teachers is concerned with transforming knowledge, beliefs and values commended by others, into classroom practice. Workplace learning can be stimulated in many different ways but, once stimulated, it occurs in both informal and planned ways. See also the Australian Research Council (ARC 1992), which argues that many of the improvements that flow from practitioner action research escape notice in the conventional educational research literature. The justification of action research is the improvement of practitioners' own practices, and writing for others is seen as secondary to this purpose. The German VET research institute in Berlin (BiBB) has taken a close interest in the interactions between teaching, learning and working in VET (see Kearns 1993).

Owen (1995) has noted the increased interest in practitioner use of relevant findings from professional social enquiry, i.e. the existing range of research and evaluation strategies. The more closely linked are the knowledge producers and practitioners, the more likely it is that new knowledge will be used. Owen draws attention to five dimensions of implementing research findings:

- institutional structural arrangements
- the content of the innovation

- the behavioural manifestations of role relationships (especially the interactional aspect of roles rather than the individual behaviours implied by the innovation's specifications)
- the knowledge and understanding that users have about the innovation
- values, including commitment to the innovation

He concludes that value changes follow changes in practice (see also Guskey 1986). In terms of strategies for increasing the use of the knowledge gained through professional social inquiry, Owen follows Backer (1993) in arguing the importance of four areas:

- utilisation requires individual and organisational change
- utilisation requires resources
- innovation adopters must be aware of the program or practice
- the adopters of innovations must be convinced that the innovations will work in their particular setting, meeting specified needs over time without excessive side effects or unreasonable cost

Backer also emphasised the importance of individual and organisational champions, and the early involvement of potential users (including with respect to how the innovation is to be introduced and how commitment to its ongoing use is to be embedded). Owen et al. (1994) argue that even the best presented research reviews and empirical investigations are unlikely to change practice without a recognition that effective use of new professional social inquiry knowledge implies changes for individuals which must be supported by their agency: 'implementation often has to be done alongside ongoing day-to-day tasks, placing enormous pressures on the capacities of site workers'.

Vickers (1995) argued that the people who chiefly determine whether research findings are implemented (those 'who make the most difference') are those closest to the action, such as teachers, students, employers and the unemployed. She concluded that effective training reform demands 'more empowerment of the practitioners, because they are the agents of change at the local level'.

Harmsworth (1997) argues that, for research to influence and improve practice, 'researcher engagement with practitioners is critical. In VET this means research partnerships with teachers and trainers and often enterprise employees'. If partnership is absent it is likely that, even if researchers uncover valuable lessons regarding learning, it will not affect practice. The Victorian Office of Training and Further Education (OTFE) views action research in the workplace involving the active involvement of practitioners as having been particularly successful in the VET sector.

Similar conclusions about the importance of practitioner characteristics and the context in which practitioners operate are found in a number of studies: for example, Cousins and Leithwood (1986); McColskey et al. (1985); and Kennedy (1984). A Canadian study (Cousins & Leithwood 1986) of 65 evaluation studies in education, mental health and social services concluded that use was most strongly evident when:

- evaluations were appropriate in approach, methodological sophistication and intensity
- the decisions to be made were significant to users and of a sort considered appropriate for the application of formally collected data
- evaluation findings were consistent with the beliefs and expectations of the users
- users were involved in the evaluation process and had a prior commitment to the benefits of evaluation
- users considered the data reported in the evaluation to be relevant to their problems
- a minimum amount of information from other sources conflicted with the results of the evaluation

McColskey et al. (1985) investigated characteristics of principals related to their reliance on formal and informal sources of information in their jobs. They found that those principals who indicated that they relied more extensively on information (both research based and other information) in reaching decisions were also more likely to have other associated characteristics. These included feeling that they had some autonomy in the administrative hierarchy, being open to new information and reporting having had more training in social science research methods compared to other principals, who relied less on information in performing their jobs. Kennedy (1984) argued that decision-makers who process information (rather than merely act on it) interact with the evidence, interpreting its meaning, deciding on its relevance 'and hence determine whether and how they will permit the evidence to influence them . . . they influence the evidence before they are influenced by the evidence'. She argued that her study suggested three possibilities as to how new information affected decision-making:

- evidence retains its factual authority, but depends on other aspects of knowledge for its normative meaning
- scientific conclusiveness is so difficult to achieve that evidence must rely on ordinary knowledge for validation by practitioners
- new knowledge (on which decision-making is based) is formed from a synthesis of all sources of knowledge

Three other matters raised in the literature are noted. First, as the training market has become more competitive there has been a search for a competitive edge by individual training providers, both public and private. One result has been a growth in market research, some of which is public, but much of which is commercial-in-confidence. Monie's study (1995) focussed on the relationship between market research and policy, planning and evaluation in VET. The OTFE manual (Tamblyn 1996) highlights situations in which market research can assist VET providers with their planning and policy development; it also identifies a range of situations for employing market research within VET organisations.

Secondly, the Centre for Educational Research and Innovation in Paris has emphasised that knowledge other than pure research is used for decision-making and that this appears to be increasing (for example, inspection, evaluations, indicators). However, it also stresses that the links between this knowledge creation and research (and how they both affect decision-making) are not clearly understood. Of course, non-research knowledge is not merely an alternative to research, since many forms of evidence can combine to influence the decision-making process (OECD 1996).

Thirdly, if research is defined widely to include evaluation there are a range of evaluation studies which can be valuable to decision-makers. Guthrie (1995) emphasised that evaluations can be inwardly or outwardly focussed; and that the National Centre for Vocational Education Research (NCVER) is producing materials to assist VET providers in the evaluation process.

Research settings

Research is carried out in a variety of settings in Australia, some independent from, others closer to, decision-makers. The research system includes tertiary educational institutions, independent research institutions—such as NCVER and the Australian Council for Educational Research (ACER)—and the less independent research units which exist within government agencies, together with those who work within them. Research in government may be conducted on an ongoing basis, within a continuing research framework.

Research can also be done on an occasional basis, within a Ministry, or collaboratively, between Ministries, different levels of government and between the public and private sectors. Research can be carried out, too, by Ministerial committees, working groups or taskforces, in a more or less structured way, drawing on research personnel from inside and outside government, having a mixture of policy, program and research skills. In some cases it may be difficult to distinguish decision-makers from advisors and researchers, for example, when researchers are recruited to work in Ministerial offices (Selby Smith et al. 1992).

In VET there has been a growth of research over recent years, carried out in a wide variety of settings. Two particular developments are noted: firstly, a growing volume of research on VET issues has been undertaken by private consultancy firms;

secondly, there has been a growth in research within VET providers, both public and private.

Whilst all these institutions deliver research outputs, each has its own history and culture, its own pattern of incentives and rewards, which influence the nature of their outputs. However, the literature, when reporting studies related to social science research, tends to concentrate on its conduct in the higher education sector. Very few studies consider social science research in other settings.

The function of the higher education system has long been expressed in terms of the preservation, communication and advancement of knowledge, carried on through teaching and research. Higher education also has cultural as well as instrumental purposes: the recent review of higher education states that 'education has special social and cultural dimensions that contribute to the transmission of knowledge, an informed citizenry and the quality of life' (West 1997). Nevertheless, the committee concluded that

> *while public funding for university research should be provided for* curiosity driven and strategic research, *funds need to be allocated in the context of a strategic view of Australia's total research effort,* with an emphasis on transferring knowledge, technology and skills to the community *(emphasis in original).* (West 1997)

They recommended that particular attention be given to further enhancing knowledge and skills transfer and improving diffusion mechanisms, so that industry and the wider community are able to benefit better from university research. They also note that personal networks and the sharing of tacit knowledge are 'fundamentally important to knowledge transfer' .

The research environment tends to have a questioning culture and is inclined to elevate basic research over applied research in terms of status and esteem. It is a competitive and personal culture, ideally more focussed on truth than power. Indeed, research can be seen as less technical problem-solving than a process of argument among peers, an attempt to demonstrate that proposition A prevails over proposition B; that is, 'research as a process of debate' (Klein

1990). Research in these settings is usually strongly oriented to academic disciplines and can undervalue multi-disciplinary work. The achievement of research findings has tended to be accorded a significantly higher priority in academic research settings than their dissemination, development or commercialisation, although this situation is changing somewhat.

The literature says less about research undertaken in other settings, although it appears that there is an increase in research on VET undertaken in private consulting firms (ACG 1994; Anderson 1996; Burke et al. 1994; Selby Smith, J et al. 1996, 1997) and by VET providers (Sefton & Waterhouse 1997; Sefton et al. 1995; Stevenson 1996; Creek & McPherson 1996). It is likely that there is:

- a different pattern of research outputs (for example, less emphasis on teaching compared to research)
- perhaps a different balance of types of research (more applied, less basic research than in universities?)
- a more variable research culture and a rather different pattern of incentives and rewards (more transparent, more rapid, more closely linked to the immediate needs of decision-makers?)

However, these tend to be possible inferences from the literature rather than firmly established by it. There is some evidence of growing overlap between research undertaken in higher education and elsewhere (West 1997; Harmsworth 1997; OECD 1996; ARC 1992), partly because of conscious efforts to strengthen the links between academic research and its impact on policy-makers and practitioners. West (1997) argues that these links should be strengthened further.

Research units in government agencies can bring research and researchers closer to the needs of governmental decision-makers (for example, in terms of topics or timing), act as a transmission mechanism to and from researchers in more academic institutions and in terms of recruiting staff with an interest in both research and decision-making. When government is the end user of the research it is likely to be closely involved in determining the programs which are undertaken and in arranging for the application of the results.

However, the Australian Science and Technology Council (ASTEC) (1985) has emphasised that such locations for research may 'introduce inefficiencies associated with short-term, politically inspired changes in mission' and involve very limited interest being shown in matters outside the agency's particular responsibilities (resulting, *inter alia*, in potential problems of horizontal integration and co-ordination).

Against this background there are certain features of the higher education research system which seem likely to be significant in terms of the use and influence of research in decision-making processes. First, research which is of particular interest to researchers may not necessarily be of particular interest to decision-makers. Conversely, research which has shortcomings from the perspective of the policy-makers need not necessarily be 'poor quality' research as assessed by peers. An emphasis on basic research rather than applied research or development may stem from a fundamental value orientation of the research setting. Also, social scientists in universities may tend to pursue lines of investigation that grow out of the core issues in their disciplines and be less interested in issues which are of more immediate relevance to decision-makers.

Secondly, the formulation of problems for study by researchers often does not match decision-makers' definitions of problems. Researchers simplify problems while decision-makers consider a wide range of complexity. Researchers conceptualise problems to fit the methodologies in which they are expert. Much social science research examines the effects of variables (such as socio-economic status) that decision-makers may find difficult to address. Where research is contracted by users, often the methodology is specified as well as the problems to be investigated.

Thirdly, there may be a disconnection between the specialisation that drives independent research and the broader view that decision-makers want (Brown 1991). Klein (1990) has noted that 'research based on single disciplines may well produce more confident, clear-cut and unambiguous policy diagnoses and prescriptions . . . but for policy makers . . . they have to take the full complexity of any situation into account'. Indeed, Brown has gone so far as to suggest that researchers' specific knowledge and approaches 'may saddle them with a "trained incapacity" (Veblen's phrase) to give due weight to variables beyond those viewed as most serviceable within their chosen disciplinary and theoretical frameworks' (Brown 1991; see also Etzioni 1985). Consequently, the effectiveness of research in influencing decision-making tends to vary inversely with the complexity of the task (Brown 1991).

Traditionally, researchers in higher education have been seen as giving higher priority to the conduct of research studies than to the marketing and wider dissemination of the research results. Researchers may not have seen it as in their interest to give this activity a high priority, and they may not have been particularly good at it (Vickers 1995). The recent literature, however, has strongly emphasised the need to change this aspect of the research system if research is to have a greater impact on policy or practice.

The dissemination director at the US National Center for Research in Vocational Education at the University of California, Berkeley, argues that the underlying premise of their dissemination strategy is 'that a person's change in behaviour—not the transmission of tangible outcomes *per se*—is the primary goal of the system' (Seidman 1997). He argues that 'the research/development/dissemination/use enterprise must be designed as a system which is holistic, collaborative and principled'. In Australia, the former Australian National Training Authority Research Advisory Council stressed dissemination and the National Centre for Vocational Education Research (NCVER 1997) states that 'the new structure for research and evaluation presented in this strategy is underpinned by the goal of improving Australia's vocational education and training systems'. Dissemination and the development of improved links with policy-makers, practitioners and other researchers are key priorities for the VET research centres in Australia (see also Bikson et al. 1995).

Finally, researchers outside the public policy process often lack comprehension of the complexities of the public sector decision-making arrangements or of the need to actively 'market' their research findings if they want their work to be taken into account. Examples of this are:

- 'Just about nobody in high office reads social science journals' (Weiss 1986)
- members of the US House of Representatives spent, on average, 11 minutes a day reading (US House of Representatives Commission on Administrative Review 1977)
- 'many if not most educational researchers have never worked in the policy arena' (Rist 1996)
- 'education researchers do not know their policy customers' (Brown 1994–5)

The Australian Research Council (ARC 1992) argued that for researchers to work interactively with policy-makers, practitioners and interest groups in education (as they advocate) requires researchers to develop new skills (see also Hocking 1990).

Educational research in Australia (ARC 1992) stated that 'there is good evidence of the valuable impact of Australian educational research' in the provision of knowledge that leads to more successful educational practices; in the development of better understanding of educational processes as they are experienced by practitioners; and in terms of the refinement and alteration of the questions which guide both research and policy development. They cited particular areas of Australian research which have made such contributions to improved policy and practice. *No small change* (McDonald et al. 1993) examined the state of VET research in Australia, concluded there were a number of deficiencies and advanced proposals for change. They noted the low level of research in education as a proportion of total expenditure, *a fortiori* in VET, and identified five 'perceived shortcomings':

- research is fragmented
- there is little fundamental and general issues-based research
- the research undertaken is not fully used

- the 'big issues' (table 3.5) need much more intensive research, within the framework of a national strategy
- the lack of any strong critique of VET policies and programs

More detailed discussion is contained in Selby Smith et al. (1998). McDonald and Hawke (1995) undertook a study of research priorities in VET in NSW, while McGaw et al. (1995) considered differences in the impact of various Australian research studies.

The strategic role of academic research (ARC 1994) noted the many pathways between basic research and the realisation of national objectives: some are quite short and direct, but others are long and multiple in nature, with complex cross-linkages. Linkages can occur at both the national and the international level; and to maintain effective international links requires Australian researchers to have international standing, to be able to collaborate with overseas researchers and to participate in international forums. Finally:

> *the realisation of the full potential of the strategic role of basic research in achieving national objectives requires a judicious mix of serendipity through the support of free-ranging curiosity-motivated research and the management of resource allocation for basic research which takes account of international and national imperatives.* (ARC 1994)

Secondly, the Centre for Research Policy at the University of Wollongong, in a report prepared for NBEET, assessed the connections between basic research and national socio-economic objectives (NBEET 1995). They argued that in considering the linkages between basic research and its application, there is an over-emphasis in the international literature on codified knowledge transfer through formally published scientific papers and patents. The report argued, however, that some of the most informative literature is that which traced the sources of uncodified knowledge, whether it is the general background knowledge provided by university research, or the particular skills and attitudes carried by personnel with a formal research training. They suggest that the structure and linkages of basic research are changing, that the process of academic research is becoming more intimately connected with application and informal, tacit methods of knowledge transfer are gaining in importance.

Wiltshire (1993) has characterised the essential characteristics of genuine research and emphasised the dichotomy with policy-making. To Wiltshire the characteristics of modern, Westminster style of government in Australia, which 'apply forcefully to the patterns of governance affecting vocational education' do not diminish but greatly enhance a number of factors. These include 'the need for research that rests squarely on exposed values for objectivity in its methodology; truth, integrity and fact in its delivery of output'; and relevance to policy, practice, community discussion and further research. He outlines a daunting list of current policy areas where further VET research is required; and supports the development of research in a range of settings. Research priorities have been frequently discussed (for example, see NCVER 1997; Australian National Training Authority Research Advisory Council 1994; Butterworth 1994; Lundberg 1993; Ramsey 1993).

Hall (1993a) argued that in 'many so-called research papers in vocational education', unsupported generalisations, political statements and working party reports lead to a paper, whose generalisations are 'then quoted as "research evidence" by other authors'. In his view, although political activity, policy statement and policy change are barely affected by research (and themselves barely affect research), practice both affects and is (in varying degrees) affected by research. He notes, too, that some 'research' seems to lead nowhere, 'having no apparent effect on anything'. Hall (1993b) concludes that 'important policy decisions have been taken on non-existent, or flimsy, research evidence' (see also Kirkby 1993 in relation to competency-based training). In discussing an earlier draft of our report a correspondent noted that the impact, or lack of impact, of research on decision-making in VET was frequently asserted, but had rarely been systematically investigated. However, Hall (1993b) did emphasise the strong statistical base for VET research, policy and practice in Australia. This included regular reporting by the Australian Bureau of Statistics (ABS), the Department of Employment, Education, Training and Youth Affairs (DEETYA) and NCVER, as noted earlier.

Linkages

The literature on this aspect is sparser than that on decision-making or research. Linkages have a two-fold task. The first is to transmit information from potential users of research within the decision-making system to researchers about the kinds of research that are needed for decision-making. The second is to transmit to potential users within the decision-making system information about relevant research that has been undertaken within the research system. A defining characteristic of linkages is information flows: because there are many forms, the system of linkages can be conceived of as a web or network (formal or informal, institutionalised or *ad hoc*, long term or temporary, etc.). Linkages are established because one party wishes to gain access to information (Rymer 1991). However, this presupposes that decision-makers know what they want; that their needs are provided to researchers in ways which the researchers can understand and make operational; and that researchers wish to respond (Selby Smith et al. 1992).

There can be difficulties in creating and maintaining effective networks, or linkages, because of differences in the values and cultures of the settings in which researchers and decision-makers operate. 'Objectivity, value neutrality, and thoroughgoing relativism have proven to be elusive goals for social scientists who aspire to influence policy' (Fox 1990). Lomas (1990) suggests that some researchers have been able to stand out from the subservience of their research to decision-making, and yet critically assess it, because their funding is less dependent upon commissioned work. However, he notes that their work runs the risk of having little impact unless they can obtain a politically important audience. One conclusion must be that unidirectional influence, rather than mutually supportive interaction on an ongoing basis, serves the best interests of neither the research nor the governmental decision-making communities.

'Thin' rather than 'dense' ongoing networks will also act as barriers to the flow of information. A particular problem can be the importance of achieving a critical mass of researchers and stable groups of informed sponsors and research users to form the basis of a strong network (Selby Smith et al. 1992). Managerialist emphasis on cut-backs and mobility in the bureaucracy and major changes in tertiary education have exacerbated the difficulty of developing continuing linkages between policy-makers, practitioners and researchers. On the other hand, there are more encouraging developments such as the establishment of national research centres by ANTA, the developments initiated by NCVER (NCVER 1997) and the establishment of the Australian VET Research Association.

There have also been major problems in maintaining adequate corporate memory. First, knowing what decision-makers want may not be a simple condition to satisfy. Indeed, if one adopts a compromising, negotiating and satisficing model there may be difficulty in satisfactorily conceptualising the objectives of the organisation compared to the varying objectives of groups and individuals within the organisation. In relation to 'managerial' compared to 'behavioural' theories of administrative behaviour, and the large number of significant actors involved in some VET research studies, it is likely that the outcomes will tend to be of a satisficing rather than maximising kind (Selby Smith et al. 1992).

Secondly, policy issues of prime concern to governmental decision-makers can shift rapidly, so that the concerns which prompted the perceived need for a research study may have been 'resolved, forgotten or drastically altered by the time the study is completed' and available for use.

Thirdly, the needs of the governmental decision-makers need to be provided to the researchers in ways which the latter can understand and operationalise. It is not always, or perhaps even generally, at all easy for potential researchers to know *which* decision-makers want *what* research, or *when*.

Fourthly, if the decision-makers know what they want and the potential researchers become aware of what is required, are they likely to respond? It is the incentives and rewards within the research system to which the researchers will particularly respond—costs, benefits and alternatives will all be relevant and may vary systematically between different researchers and different research settings. Apart from the possibility of intrinsic interest in the research topic itself, investment in the skills and knowledge required to undertake good research into particular VET research areas will be more likely if it involves a continuing series of research projects in the area rather than a one-off study (for example, see Monash University-ACER Centre for the Economics of Education and Training 1997).

The Organisation for Economic Co-operation and Development, more than a decade ago, undertook valuable studies in this area (OECD 1979, 1980). A more recent publication (OECD 1991) emphasised the importance of a continuing science and technology watch and argued that 'the innovation process [depends] as much on effective interaction between the various actors as on the content of scientific discoveries and technical progress'. In the field of educational research, issues concerned with strengthening the links between research, policy and practice have been discussed in two recent publications, *Education research and reform: An international perspective* (OECD 1994b) and *Educational research and development: Trends, issues and challenges* (OECD 1995).

In its latest publication the Centre for Educational Research and Innovation (CERI) states that:

> *It is rash to implement educational change without a good knowledge of what is likely to be effective. Yet in practice, educational decisions seem in many cases to be taken rather unsystematically, with no consistent reference to available knowledge bases.* (OECD 1996)

One reason, that in CERI's view is becoming increasingly apparent, is that 'the forms of knowledge that are relevant to education, as well as the processes by which decisions are taken, are diverse as well as complex. Not all of them are reducible to formulation in scientific terms'.

White et al. (1988; see also Scott 1991) considered the dissemination and utilisation of UK research and development in vocational education and training. They argued that it is important to clarify precisely what different players' criteria are for successful dissemination and utilisation of research and development. They then explained that the indicators of 'successful' research and development vary depending on the position and needs of the person or organisation in relation to each specific project. Finally, they asserted that since dissemination must be defined in terms of what is useful to recipients (and there are different groups of potential recipients whose needs may well differ) 'it is necessary to consider dissemination in terms of a system of communication capable of meeting a variety of needs'.

White suggested that consideration be given to the perspective of end users, i.e. teachers and trainers, providers and policy-makers. In relation to teachers and trainers, White suggests research information needs to be easily accessible and readily updatable to help them learn how to effectively implement major new developments and assess their relevance; to facilitate more rapid transfer of new ideas from research and development to the provision of training and teacher updating; and to allow improved access to data on the likely quality of that knowledge. In relation to providers White argues that major developments in VET should be communicated in such a way as to clarify their implications for planning, resources and management.

He also suggests that:

- there be two-way communication to ensure these implications are considered as the research and development work is carried out
- providers are involved in assessing the value of such projects
- up-to-date labour market information is more easily available
- research into effective management be communicated to higher levels (White, chapter 3, reported in Scott 1991)

White also recommends specific tactics for improving research and development effectiveness, including how the results of research projects could be included in teacher training or updating.

Huberman (1990) has argued that 'intensified contacts in the life of a research project can result not only in applications of the main findings, but also in the establishment of multiple areas of collaboration between the two parties that transcend the impact of a single study'. His study is of particular interest given Huberman's contribution to this field of knowledge, the rigour of his research study and its focus on a national research program in vocational education and training.

Huberman identifies three important processes in the user-researcher contacts. First, interim feedback helps to educate practitioners to the drift and impact of the emerging data, giving them time to assimilate the findings and accommodate to their local implications. Through these interactions, over a period of one to two years, the practitioners come gradually to master the study conceptually and researchers come to see how practitioners are construing the import of the data and thus, see how to rectify eventual misrepresentations. Secondly, interactions over time—between parties who, up to then, had had relatively little to do with one another—can create the interpersonal climate in which substantive exchanges could occur with minimal friction or defensiveness (the 'taming factor', where Huberman highlighted the importance of informal, off-task encounters).

Finally, the contacts made during the study, in order to discuss specifically the dissemination of findings to different target publics, obliged both sides to think early on and more operationally about the meaning of the findings in the local context. Also, discussing the modalities of disseminating the study created the requisite conditions for follow-through; and created the classic conditions for attitude change or attitude-strengthening.

Huberman's summary of the responses from the seven sets of mutual engagement showed the close mesh between the more substantive findings (e.g. feedback) and the more interpersonal discussions of researcher-practitioner contacts (e.g. personal relationships). In fact, it was not always possible to determine from the fine-grained qualitative analyses whether the outcomes were strengthening the links, or whether the links were helping to cement the findings in the practitioner setting: 'the clearest signs point to reciprocal effects'. Stronger linkages were directly related to strength of outcomes. Also, it was found that the dissemination efforts could lead later on to increased and more varied collaboration between research units and practitioner settings. In this case, research findings could flow into practitioner settings and craft knowledge could move into research settings as a natural function of the ongoing relationships between both parties, feeding more or less automatically into their customary transactions. Huberman suggests that about 12 per cent of the total project time needs to be budgeted at the outset (i.e. built into the study timeline) and that 'the effects of single articles, vulgarised monographs and one-shot workshops are often problematic'. Vickers considered how the impact of research might be increased (Vickers 1995) and concluded that 'effective training reform may demand more inclusion—more empowerment of the practitioners, because they are the agents of change at the local level'.

The importance of intermediaries in bridging the gap between researchers, policy-makers and practitioners is stressed in OECD (1996). Similarly, a recent UK study of the payback from research projects identified 'policy-maker involvement and brokerage, as key factors in enhancing utilisations' (Buxton & Hanney 1994). The entrepreneur is a two-way intermediary, acting on behalf of the policy community to ensure that research is appropriately designed, as well as on behalf of researchers to make it properly understood. 'Such entrepreneurs can potentially mediate knowledge in all directions along the "knowledge triangle"—of knowledge producers, decision-makers and practitioners' (OECD 1994a).

CERI also noted the importance of disseminating knowledge, including research knowledge for improved decision-making in education, across national frontiers as well as within them (OECD 1996). Such activity has a long history, has tended to increase in recent decades (but probably less in VET than in higher or school education) and may be of particular importance for small countries such as Australia. Australian researchers, Australian policy-makers and Australian practitioners interact with overseas colleagues as well as with each other. We gain from overseas discussion, thinking and practice, but we also contribute to it. Public opinion can be affected too, directly and indirectly, by overseas developments in knowledge or practice. The resulting interactions add a further level of complexity to the web of linkages (Rizvi 1997; Stern 1996; ARC 1992).

Educational research in Australia (ARC 1992) noted that submissions to the review had clearly expressed a desire for better links between researchers, policy-makers and practitioners; but that these aspirations were based on hope for improved linkages in the future rather than on past performance. They suggested a number of remedies, including more state-of-the-art reviews, publication of general (and specific) directories and more efforts to disseminate research. Indeed, they stated that their various proposals had 'a common purpose: to force educational researchers, practitioners and policy-makers to engage more directly in dialogue about the desirable shape of Australian education, and the role that research can play in securing that future'.

NCVER is making conscious efforts to further improve the dissemination of VET research to policy-makers, practitioners and other researchers; and to communicate the needs of policy-makers and practitioners to researchers (i.e. to foster the web of linkages). 'In the past the outcomes of research and education projects have often not been readily available to policy-makers, practitioners and other important stakeholder groups in forms which were useful to them' (NCVER 1997). As part of the national research and evaluation strategy for VET in Australia 1997–2000, NCVER is proposing a range of dissemination methods, both formal and informal. These include:

- publishing research reports, journal articles and disseminating research information in magazines and newsletters
- running face-to-face activities such as conferences or workshops
- utilising databases such as VOCED (Vocational Education Database)
- developing networks of stakeholder and interest groups
- using publications to meet the needs of particular 'markets'

- making improved use of technology
- using the World Wide Web
- establishing a VET sector research and evaluation hotline[4]

At the State level, Harmsworth (1997) has recognised the importance of the linkages between policy-makers and researchers and argued for fostering direct dialogue. This would occur through clearer identification of policy priorities, formulation of research questions, a tighter focus by researchers on the policy implications of their research and the combination of researcher, policy-maker and industry voices on reference bodies. He noted some dangers, however, including that 'career progression as a researcher is (generally) dependent on maintaining critical independence' (see also Butterworth 1994; and Ramsey 1993). In order to improve further the linkages between researchers and policy-makers, Harmsworth proposed:

- wide dissemination and debate
- research forums to be based on key policy issues rather than on research projects
- greater emphasis on stocktakes of existing research for policy implications
- consideration of the needs of multiple target audiences
- greater emphasis on dissemination in non-research publications

Up to a quarter of the National Research and Evaluation Committee's (NREC) budget is available for such approaches. The Office of Training and Further Education (OTFE) has also commissioned an investigation on how best recent research can contribute to VET policy deliberations within the Victorian State training system (Billett 1997).

Findings from the literature review

This literature review is part of a broader study investigating the research question 'what impact has research had on VET decision-making in Australia?' (Selby Smith et al. 1998). The literature review confirms the untenable nature of any 'simple impact model' (Anderson & Biddle 1991); the complexity of the relationship between research and decision-making; and the value of examining the relationship in terms of decision-making, research settings and linkages.

The literature influenced the research team's thinking on 'impact' issues in the specific context of VET in a number of important respects.

On decision-making

- There are a number of relevant literatures (e.g. political science, public choice, social psychology, sociology). Where they focus on decision-making they tend to focus on public policy. Much less attention is paid to decision-making at the practitioner level, whether in public or private organisations.
- Decision-making is complex. There are many approaches to its analysis, but all of them highlight the complex interactions between the wide range of determining elements.
- The use of research in decision-making is mediated through the particular interactions between the elements that impact on decision-making.
- The literature tends to concentrate on the information role of research; less attention is given to the other outputs from the research system and their potential roles in decision-making.
- The decision-making setting in VET can be characterised as complex, complicated, dynamic and contested.

On research

- The literature concentrates on research in universities. Relatively little attention has been given to the growth of research elsewhere, particularly at provider level and in private consultancy firms.
- The values and cultures, and the pattern of incentives to which they respond, tend to differ systematically between research (particularly in the universities) and decision-making. These differences reflect, in

part, that universities have social purposes in addition to the support of better decision-making.

- Nevertheless, researchers, especially those in higher education, are often unfamiliar with the complexities of the policy process, which tends to limit the use of their research by decision-makers (e.g. because of choice of research projects, timeliness, format of reports or the approach to recommendations for use).
- Research is of many kinds, which impact on decision-making in different ways. For example, different types of research may be appropriate at different stages of the policy cycle, in different settings or for different stakeholders.
- The question of whether the quality of research affects its use in decision-making is raised in the literature, but the conclusion is ambiguous. The judgement of quality is subjective; and the criteria applied by researchers and decision-makers can differ. The prior beliefs of the decision-makers and the context in which they are operating can lead to 'good quality' research not being used, while poorer quality research is used. Research may be judged according to *who* did it rather than what was done.
- The literature indicates that there is an increase in VET research, including at the practitioner level, that VET research is not wholly conducted in higher education, and that the research that is undertaken is widely seen as not having as much impact as it might.

On linkages

- The literature has tended to focus on linkages involving the flow of information. More recently, greater recognition has been given to the movement of people as an important linkage between research and decision-making.
- The flow of information between the research settings and decision-making is likely to have greater impact if linkages occur throughout the research project rather than solely at the end. The development of such linkages facilitates ongoing interaction and increases the chance of research being used; it also assists researchers to understand better the needs of decision-makers.
- Where research occurs in decision-making settings (e.g. research in government agencies or at the practitioner level) the linkages between research and decision-making are closer and there is a

greater likelihood of external research also being taken into account for decision-making.

Special note

The above review is part of a larger study by C Selby Smith, G Hawke, R McDonald and J Selby Smith, *The impact of research on VET decision-making*, to be published by NCVER.

The overall research question of the study was: *To review the evidence for and, where possible, evaluate the extent of influence of research in VET.*

The research team's answer to the question, as given in the section, *The synthesis of the impact project* is reproduced as follows:

The evidence is that research has impact—use and influence—on VET decision-making, but not in the way many people think.

- *The research enterprise is accumulative. Much research does not stand on its own as a piece of work, but adds to that which existed before. This accumulating body of knowledge contributes in decision-making to the creation of a climate of opinion and the development of a set of ideas, so that at any given time certain ideas, approaches or ways of thinking are in 'good currency', whilst others are not or are no longer so. Over time, research's main contribution may be to the 'big ideas'. A number of the 'big ideas' preoccupying senior VET decision-makers in recent years are grounded in research.*
- *The outputs of the research system also include research skills and attitudes and trained personnel (human capital). They contribute to the maintenance and development of the research system and can contribute in varying degrees to decision-making. These outputs are often overlooked: they were largely ignored by 'users' at the symposium. However, the contribution of human capital to improved decision-making was demonstrated in a number of the case studies. The absence of these research outputs substantially weakens VET decision-making.*

- *The impact project provides evidence that individual research studies are used and have influence on VET decision-making in policy and planning, practice and performance within provider organisations, and community relations. However, examples of individual studies may not be typical, so that the value of research cannot be judged by them alone.*

It is not possible to evaluate (quantitatively) the extent of the influence of research on VET decision-making. The extent of its influence is positive but less than unity.

- *There are many different types (broadly defined) of research and these can be used in a wide range of decision-making contexts. These different types of research have varying levels of visibility to the separate groups of users and other stakeholders and affect these groups' knowledge of the extent of the influence of research. Thus, a priori, one cannot conclude which types of research are used and have influence more than others: it depends.*
- *The extent of the use or influence of research cannot be determined by considering the research system alone. Its use and influence depends critically on the circumstances of decision-making in a particular context and the linkages between research and decision-making in that context. The impact project demonstrates there are many contexts.*
- *There are many (potential) uses of research in VET decision-making. The extent of research's use and influence can depend upon the decision-making setting. Uses include: to resolve a particular problem; as a weapon in explicit political or bureaucratic conflict; to justify a decision already made; as well as the more generally recognised use in problem solving or to assist users to increase their conceptual understanding of an issue. VET research has been used in these various ways at different times, although it is not always made explicit.*

The extent to which research can be used and have influence in VET decision-making can be enhanced by the actions of the stakeholders.

- *The researchers have an obligation to be committed to the research enterprise, to keep up to date in their field, to maintain the quality of their work and to be willing to engage with their broader communities.*

Appropriate incentive structures will encourage such behaviour by researchers (and conversely).

- *The decision-makers have an obligation to be engaged with the world of ideas and to think, read and participate in intellectual debate. They cannot expect to make good decisions without thought: they have the responsibility as professionals to develop their own human capital. They are unlikely to act in this way unless the incentive structures in their work settings encourage such actions.*
- *To the extent that a significant amount of research is now commissioned by training authorities and other users, these groups' actions will also influence the quality of research. A strong preference for research which is short-term and instrumental can in the longer term weaken the research base.*
- *A weak network of effective linkages undermines the potential for research to be used in VET decision-making and to have influence. It limits the potential for the two-way flow of information and people and for feedback. The emphasis on linkages rather than dissemination (narrowly defined) increases the mutual responsibilities of the parties.*

Enduring linkages are based on the sustained mutual esteem and understanding of the potential contribution of each party, and where those linkages emphasis collaboration for the good of the VET system as a whole.

Endnotes

1 This chapter is an edited version of chapter 2 of Selby Smith, C, Hawke, G, McDonald, R & Selby Smith, J 1998, *The impact of research on VET decision-making*, National Centre for Vocational Education Research, Adelaide, forthcoming.

2 'Impact' was defined to incorporate two elements: 'use' and 'influence'. 'Use' refers to whether the research has served a particular purpose; whereas 'influence' relates to whether the research had an effect on decision-making, i.e. whether it made a difference to the decision made.

3 A general discussion of decision-making in theory and practice from an Australian perspective is contained in Corbett (1992): see also Emy & Hughes (1991). A commentary on the reality of policy-making in Australia in the VET context is given by Wiltshire (1993).

4 Keen at the University of NSW has also been researching the linkages between research policy and practice in Australian education, but her working drafts are not yet available for citation.

References

ACG (Allen Consulting Group) 1994, *Successful reform: Competitive skills for Australians and Australian enterprises*, Australian National Training Authority, Brisbane.

Anderson, D 1996, *Reading the market: A review of literature on the VET market in Australia*, Monash University-ACER Centre for the Economics of Education and Training, working paper no. 5.

Anderson, D & Biddle, B (eds) 1991, *Knowledge for policy: Improving education through research*, The Falmer Press, London.

Anderson, T & Scott, H 1997, 'Using research to assist policy implementation: A case study', in NSW TAFE Research Association papers presented at 1996 Conference at Sydney Institute of Technology, December 1996, pp. 8–15 , Sydney.

ARC (Australian Research Council) (chair: B McGaw) 1992, *Educational research in Australia*, AGPS, Canberra.

—— —— 1994, *The strategic role of academic research*, AGPS, Canberra.

ASTEC (Australian Science and Technology Council) 1985, *Public investment in research and development in Australia: A report to the Prime Minister by ASTEC*, Australian Government Publishing Service, Canberra.

Australian National Training Authority Research Advisory Council 1994, *Research priorities in vocational education and training: A discussion*, NCVER, Adelaide.

Backer, T 1993, 'Information alchemy: Transforming information through knowledge utilization', *Journal of the American Society for Information Science*, vol. 44, no. 4, pp. 217–221.

Bikson, T, Law, S, Markovich, M & Harder, B 1995, 'Facilitating the implementation of research findings: Review, synthesis, recommendations', *Proceedings of the Transportation Research Board*, National Academy Press, Washington DC.

Billett, S 1997, 'VET policy and research: Emerging issues and changing relationships', paper given at Monash University, 6 November, Melbourne.

Brown, L 1991, 'Knowledge and power: Health services research as a political resource', in *Health services research: Key to health policy*, ed. E Ginzberg, Harvard University Press, Massachusetts, pp. 20–45.

Brown, S 1994–95, 'Research in education: What influence on policy and practice?', *Knowledge and Policy*, vol. 7, no. 4, Winter.

Burke, G, McKenzie, P, Maglen, L, Selby Smith, C, Ferrier, F, Selby Smith, J 1994, *The economics of vocational education and training: A review of recent literature*, ANTA, Brisbane.

Butterworth, P 1994, 'VET research in Australia: A long way to go', *Australian and New Zealand Journal of Vocational Education Research*, vol. 2, no. 1, pp. 19–34.

Buxton, M & Hanney, S 1994, *Assessing payback from Department of Health Research and Development*, vol. 1, Health Economics Research Group, Brunel University, Uxbridge.

Carnevale, A 1995, 'Education, training and the economy', paper presented at the VICAD national conference, Increasing National Productivity Through Skills Formation: The Role of Education and Training Systems, Melbourne.

Corbett, D 1992, *Australian public sector management*, Allen and Unwin, St Leonards, Sydney.

Cousins, J & Leithwood, K 1986, 'Current empirical research on evaluation utilisation', *Review of Educational Research*, vol. 56, no. 3, pp. 331–364.

Creek, G & McPherson, W 1996, 'Aboriginal rural traineeships', paper presented at the inaugural national Aboriginal and Torres Strait Islander peoples' vocational education and training conference, Challenging Outcomes, Surfers Paradise.

Downs, A 1972, 'Up and down with ecology: The issue attention cycle', *The Public Interest*, vol. 28, pp. 38–50.

Emy, H & Hughes, O 1991, *Australian politics: Realities in conflict*, 2nd Edition, Macmillan, South Melbourne.

Etzioni, A 1985, 'Making policy for complex systems: A medical model for economics', *Journal of Policy Analysis and Management*, vol. 4, pp. 383–95.

Evans, R 1986, 'Finding the levers, finding the courage: Lessons from cost containment in North America', *Journal of Health Politics, Policy and Law*, vol. 11 no. 4, pp. 585–615.

Finch, J 1986, *Research and policy: The uses of qualitative methods in social and education research*, The Falmer Press, London.

Fox, D 1990, 'Health policy and the politics of research in the United States', *Journal of Health Politics, Policy and Law*, vol. 15, no. 3, Fall, pp. 481–499.

Goozee, G 1994, 'NSW Board of Vocational Education and Training's research and development activities', talk given at NSW TAFE Research

Association meeting, 7 December, Wollongong (available through NSW TAFE Clearinghouse, Strathfield, Sydney).

Guskey, T 1986, 'Staff development and the process of change', *Educational Researcher*, vol. 125, no. 5, pp. 5–13.

Guthrie, H 1995, 'Evaluation of training and other programs', pp. 781–789 in OTFE, Research and Practice: Building the Links, VET Research Conference, 12–13 October, OTFE, Melbourne.

Hall, W 1993a, 'Does research influence policy?, in National TAFE Seminar, Kooralbyn, 7-8 October, NCVER, Adelaide, pp. 76–80.

—— —— 1993b, 'School-TAFE interface', in National TAFE Seminar, Kooralbyn, 7–8 October, NCVER, Adelaide, pp. 81–86.

Ham, C 1985, *The politics and organisation of the National Health Service*, Macmillan, London.

—— —— (ed.) 1997, *Health care reform: Learning from international experience*, Open University Press, Bristol.

—— —— & Hill, M 1984, *The policy process in the modern capitalist State*, Wheatsheaf Books, Sussex.

Harmsworth, P 1997, 'Policy, practice and research in VET', lecture to Monash University Doctorate of Education students, 10 September, Melbourne.

Hirsch, D 1996, 'Report of the Maastricht Conference', in *Knowledge bases for education policies*, OECD, Paris, pp. 21-32.

Hocking, H 1990, 'Educational research in chaos: New paradigms for the changing era', *Australian Educational Researcher*, vol. 17, pp. 1–21.

Huberman, M 1990, 'Linkages between researchers and practitioners: A qualitative study', *American Educational Research Journal*, Summer, vol. 27, no. 2, pp. 363–391.

Illsley, R 1988, 'Introduction', in *Health systems research in action*, World Health Organisation, Geneva.

Kearns, P 1993, *A review of research and development structures and practices for vocational education, training and employment in five OECD countries*, NCVER, Adelaide.

Kennedy, M 1984, 'How evidence alters understanding and decisions', *Educational evaluation and policy analysis*, Fall, vol. 6, no. 3, pp. 207–226.

Kirkby, D 1993, 'Competence: Methodology or ideology?', *Curriculum Perspectives*, vol. 13, no. 3.

Klein, R 1990, 'Research, policy and the National Health Service', *Journal of Health Politics, Policy and Law*, vol. 15, no. 3, Fall, pp. 501–523.

Lee, K & Mills, A 1982, *Policy-making and planning in the health sector*, Croom Helm, London.

Liberal Party of Australia 1996, 'Ensuring better education and training', pre-election policy statement, Melbourne.

Lipsky, M 1980, *The street level bureaucrat*, Russell Sage Foundation, New York.

Lomas, J 1990, 'Finding audiences, changing beliefs: The structure of research use in Canadian health policy', *Journal of Health Politics, Policy and Law*, vol. 15, no. 3, Fall, pp. 525–542.

Lundberg, D 1993, 'Non-TAFE or private providers', in National TAFE Senior Executives Conference, Kooralbyn, 7-8 October, NCVER, Adelaide, pp. 106–113.

Matheson, C 1997, 'The premises of decision-making in the Australian Public Service', Australian *Journal of Public Administration*, vol. 56, no. 1, pp. 13–24.

McColskey, W, Altschuld, J & Lawton, R 1985, 'Predictors of principals' reliance on formal and informal sources of information', *Educational Evaluation and Policy Analysis*, Winter, vol. 7, no. 4, pp. 427–436.

McDonald, R & Hawke, G 1995, *Three strings to the bow: Research priorities for NSW*, Research Centre for Vocational Education and Training, University of Technology, Sydney.

—— —— Hawke, G, Hayton, G, Gonczi, A & Hager, P 1993, *No small change: Proposals for a research and development strategy for vocational education and training in Australia*, VEETAC, Canberra.

McGaw, B, McDonald, R & Hawke, G 1995, 'Educational research and development in Australia', paper presented to the International Conference on Teacher Education, Bangkok, Thailand.

Milward, HB & Laird, W 1996, 'Where does policy come from?', in *Agenda for excellence 2: Administering the State*, BG Peters & BA Rockman, Chatham House Publishers, Chatham New Jersey, pp. 38–75.

Monash University-ACER Centre for the Economics of Education and Training 1997, *Report to the Australian National Training Authority*, CEET, Melbourne.

Monie, P 1995, *Market research methodologies for VET institutions: OTFE project*, OTFE, Melbourne.

NBEET (National Board of Employment, Education and Training) 1994, *Workplace learning in the professional development of teachers*, AGPS, Canberra.

—— —— 1995, *Using basic research*, commissioned report no. 36, AGPS, Canberra.

NCVER (National Centre for Vocational Education Research) 1997, *The National research and evaluation strategy for VET in Australia 1997–2000*, NCVER, Adelaide.

OECD (Organisation for Economic Co-operation and Development) 1979, *Social sciences in policy*, OECD, Paris.

—— —— 1980, *The utilisation of the social sciences in policy making in the United States*, OECD, Paris.

—— —— 1991, *Choosing priorities in science and technology*, OECD, Paris.

—— —— 1994a, *Investment in education and economic growth: Markets for learning and educational services*, OECD/CERI, Paris.

—— —— 1994b, *Education research and reform: An international perspective*, OECD, Paris.

—— —— 1995, *Education research and development: Trends, issues and challenges*, OECD, Paris.

—— —— 1996, *Knowledge bases for education policies*, OECD, Paris.

Owen, J 1995, 'Can research and education findings affect the working knowledge of practitioners?', *Evaluation Journal of Australia*, vol. 7, no. 2, pp. 16–28.

—— —— Lambert, FC & Stringer, WS 1994, 'Acquiring knowledge of implementation and change: Essential for program evaluators', *Knowledge: Creation, diffusion, utilization*, vol. 15, no. 3, pp. 273–294.

Palmer, G & Short, S 1994, *Health care and public policy: An Australian analysis*, Macmillan, Melbourne.

Peters, G & Hagwood, B 1985, 'In search of the issue-attention cycle', *Public Interest*, vol. 47, pp. 238–53.

Pusey, M 1991, *Economic rationalism: A nation-building State changes its mind*, Cambridge University Press, Cambridge.

Ramsey, G 1993, 'Vocational education and training: Making an impact', in *The research experience in TAFE*, NSW TAFE Research Association, Sydney Institute of Technology, Ultimo, pp. 6–11.

Rist, R 1994, 'Influencing the policy process with qualitative research', in *Handbook of qualitative research*, eds N Denzin and Y Lincoln Sage Publications, Thousand Oaks, California.

—— —— 1996, 'Information needs in the policy arena: Linking educational research to the policy cycle', pp. 141–154 in OECD (1996).

Rizvi, F 1997, 'International markets in education', paper given at Third UNESCO-ACEID Conference, 1-4 December, Bangkok, Thailand.

Robertson, S & Beresford, Q 1996, 'Co-ordination in youth affairs: The politics of non-decision-making', *Australian Journal of Public Administration*, vol. 55, no. 1, pp. 23–32.

Rymer, L 1991, 'Mechanisms to facilitate technology transfer between the public and private sectors', unpublished paper, Department of Industry, Technology and Commerce, Canberra.

Sabatier, P 1987, 'Knowledge, policy-oriented learning and social change', *Knowledge: Creation, Diffusion, Utilization*, vol. 8, no. 4, June, pp. 649–692.

Schon, D 1971, *Beyond the stable State*, Norton, New York.

Scott, G 1991, 'How do we know research and development projects in vocational education and training are cost-effective: A review article', *Studies in Continuing Education*, vol. 13, no. 1.

Sefton, R & Waterhouse, P 1997, 'Teachers at work: Utilising professional teaching skills in an industry setting', *Australian Journal of Education*, forthcoming.

—— —— Waterhouse, P & Cooney, R 1995, *Workplace learning and change: The workplace as a learning environment*, Automotive Training Australia Ltd, Melbourne.

Seidman, P 1997, *Designing the research/development/dissemination/use enterprise as a holistic, collaborative and principled system*, National Center for Research in Vocational Education, University of California, Berkeley.

Selby Smith, C, Davis, D, Fletcher, A, Fox, C, Ridoutt, L & Selby Smith, J 1992, *National Health Labour Force Research Program*, Graduate School of Management, Monash University, Melbourne.

Selby Smith, J, Selby Smith, C & Ferrier, F 1996, *National evaluation of the 1996 user choice pilot projects: Stage 1: Interim Report*, ANTA, Brisbane.

—— —— Selby Smith, C & Ferrier, F 1997, *National evaluation of the 1996 user choice pilot projects: Stage 2: A Report to ANTA*, ANTA, Brisbane.

—— —— & Selby Smith C 1998, 'User choice and beyond: Developing the policy', in *The market for vocational education and training: Who pays and who profits in 1997 and beyond?*, NCVER, proceedings of a conference held in Adelaide, 28-30 July 1997.

Selby Smith, C, Hawke, G, McDonald, R & Selby Smith, J 1998, *The impact of research on VET decision-making*, NCVER, Adelaide, forthcoming.

Steering Committee for the Review of Commonwealth/State Service Provision 1997, *Reforms in government service provision*, AGPS, Canberra.

Stern, D 1996, *School-to-work policy: Insights from recent international developments*, NCVER, Graduate School of Education, University of California, Berkeley.

Stevenson, J 1996, *Learning in the workplace: Tourism and hospitality*, Centre for Skill Formation Research and Development, Griffith University, Brisbane.

Tamblyn, A 1996, *Market research manual for providers of vocational education and training*, OTFE, Melbourne.

US House of Representatives Commission on Administrative Review 1977, *Final report of the 95th congress*, 1st Session.

Vickers, M 1995, *Knowledge for policy: What VET research can contribute to the training agenda*, Keynote Speech at the Australian National Training Authority Research Advisory Council (ANTARAC) Research-in-Progress Conference, 28 September, Sydney.

Weiss, C 1986, 'The circuitry of enlightenment', *Knowledge: Creation, Diffusion, Utilization*, vol. 8, no. 2, December, pp. 274–281.

—— —— 1989, 'Congressional committees as users of analysis', *Journal of Policy Analysis and Management*, vol. 8, no. 3, pp. 411–431.

—— —— with Bucuvalas, MJ 1980, *Social science research and decision-making*, Columbia University Press, New York.

Weller, P 1996, 'Commonwealth-State reform processes: A policy management review', *Australian Journal of Public Administration*, vol. 55, no. 1, pp. 95–110.

West Report (Review of Higher Education Financing and Policy, chair R West) 1997, *Learning for life: A policy discussion paper*, AGPS, Canberra.

White, M with Christie, I & Johnson, S 1988, *Making connections: Disseminating R&D for vocational education and training*, Policy Studies Institute, Oxford.

Whitney, L 1996, 'Response', in *Knowledge bases for education policies*, pp. 165–167, OECD, Paris.

Wiltshire, K 1993, 'The role of research in policy making', in National TAFE seminar: Kooralbyn, 7-8 October, pp. 65–75, NCVER, Adelaide.

Wiseman, C 1978, 'Selection of major planning issues', *Policy Sciences*, vol. 9, pp. 71–86.

Chapter index

1

An overview of the research and evaluation effort in vocational education and training, 1
- assessor training, 22
- decision making, 4
- enterprises, 9
- entry-level training, 15
- evaluation, 26
- flexible delivery, 20
- impact of research, 27
- in schools, 16
- public and private training provision, 18
- quality, 3
- quality assurance, 24
- research and evaluation in VET, 7
- research and evaluation methods, 5
- small business, 10
- training markets, 13
- vocational education and training investment, 9
- workplace learning, 7

2

Learning in workplace, 30
- assessing on the job, 51
- authentic learning experiences, 48
- crediting workplace performance, 49
- industrial relations issues, 52
- integration of, 43
- language and literacy, 48
- policy, 32
- portability skills, 40
- quality of learning materials, 48
- record keeping, 51
- size of company/business, 49
- training cost benefits, 42
- training outcomes, 40
- transferable skills, 36
- workplace environment/culture, 45

3

Enterprises and investment in VET, 57
- approaches to appraising returns, 75
- enterprise size and formal training, 61
- enterprises and investment, 59
- investment, 82
- location, 68
- returns, 84
- returns on investment, 70
- size, 60
- specialisation, 67

4

Small business, 91
- barriers to, 103
- credibility and quality of training, 123
  - —mentoring, 125
  - —professional development for training providers, 124
- definition of, 92
- delivery of training, 119
- diverse nature of, 105
- entry-level training, 99
- information, 120
- needs of people with a disability, 135
- networks, 122
- non-English-speaking small business owners, 133
- rural sector, 132
- scale of, 105
- statistics, 93
- training needs of employees, 109
- women, 129
- workplace-based training, 115

5

Training market, 143
- definitions of, 147
- failure of, 154
- funding of, 180
- impact and consequences of competition and market reform, 195
- key policy issues, 187
- models of, 162
- policy principles and objectives of, 150
- pre-conditions for an effective, 151
- regulation of, 183
- role of government, 175
- size, structure and composition of, 156
- types and levels of competition, 160

6
Entry-level training, 218
  distortions in government funding arrangements, 233
  equity, 234
  funding, 232
  industrial relations, income formation and training, 221
  key competencies, 228
  national or enterprise focus, 230
  post-compulsory education and training, 219
  systemic changes in, 222
  work-based, 234

7
Vocational education in schools, 245
  expectations, 248
  pathways and objectives, 251
  policy climate, 246
  programs, 249
  resources, 259
  students and participation, 257

8
Public and private provision, 267
  access and equity, 294
  assessment and RPL, 294
  characteristics of VET providers, 270
    —comparative studies of public and private providers, 280
    —course provision, 276
    —dimensions of the training market, 270
    —private provider categories, 278
    —private VET provision, 271
  competency-based training, 293
  competitive neutrality, 293
  competitive tendering, 292
  cost-shifting, 293
  data about private providers, 291
  open or competitive training market, 268
  outcomes, 291
  preferred provider approach, 292
  public versus private, 281
  quality, 293

9
Flexible delivery of training, 297
  access and learner support, 303
  barriers and issues, 311
  cost and benefits, 313
  in industry, 307
  learning effectiveness, 303
  managing change, 312
  orientation of research, 299
  policy framework, 297
  responding to special needs in access, 305
  staff development needs, 309

10
Assessor training programs, 319
  assessing and certificating, 325
  cost and benefits of, 334
  how certificated assessors use their skills, 333
  kinds of programs, 322
  maintaining quality in, 328
  marketing and promoting, 331
  organisations involved, 331
  policy and practice, 335
  registering, 326
  selecting assessor trainees, 332
  target learning outcomes, 323

11
Quality assurance, 340
  ascertaining customer views and needs, 354
  best practice and benchmarking, 346
  Crosby method, 344
  industrial relations and HRM issues, 353
  personnel requirements, 352
  planning the implementation, 352
  process re-engineering, 351
  quality assurance: the ISO 9001 / AS 3901 standards, 344
  quality matrix, 345
  quality program, 343
  roles of monitoring, assessment and evaluation procedures, 354
  self-managed teams, 348
  staff development programs, 353
  total quality management (TQM), 343

12
Evaluation, 363
  in Australia, 370
  of the 'big' issues, 376
  policy focus, 375
  theory base, 374

13

Decision-making in VET, 380
- at the practitioner level, 393
- findings from literature review, 413
  - —on decision-making, 414
  - —on linkages, 415
  - —on research, 414
- in Australia, 391
- linkages, 406
- other research inputs, 390
- research as information, 383
  - —categories, 384
- research settings, 398

Readings in Australian Vocational Education and Training Research brings together recent Australian research literature covering a range of key vocational education and training (VET) issues. The authors are drawn from a cross-section of Australia's foremost VET researchers.

Topics include aspects of enterprise or workplace-based training and learning, training markets, entry-level and school-based VET and the quality of training. Overviews of recent VET research and evaluation, including an examination of the impact of VET research on decision-making are also provided.

Readings in Australian Vocational Education and Training Research forms an invaluable resource for policy-makers, trainers and teachers, researchers and students in vocational education and training. It was produced by the National Centre for Vocational Education Research (NCVER) with the assistance of funding by the Australian National Training Authority (ANTA).

NCVER

438